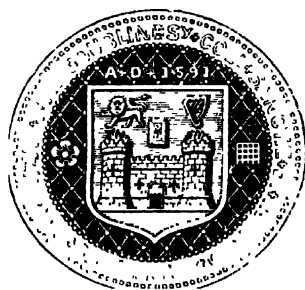


A COMPARATIVE GRAMMAR  
OF  
SANSKRIT, GREEK, AND LATIN.

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# P R E F A C E .

MOST of those writers on Philology to whose works I am indebted are mentioned either in the text or notes of this book, and I have here only to express my especial obligations to the writings of Bopp, Schleicher, Corssen, Curtius, and Bücheler, and to several valuable essays in Kuhn's *Zeitschrift* by Ebel, Grassmann, Dietrich, Walter, and others.

I have also to thank Dr. C. Lottner, Professor of Sanskrit in the University of Dublin, for helping me in the revision of the proof-sheets, and for many valuable suggestions supplied during the progress of the work.

The abbreviations occurring in the text do not require much explanation, and the following only require to be noticed:—

|                               |                            |
|-------------------------------|----------------------------|
| A. S., . . . Anglo-Saxon.     | Gr., . . . . . Greek.      |
| Ch. Sl., . . Church-Slavonic. | Ir., . . . . . Irish.      |
| E., . . . . . English.        | It., . . . . . Italian.    |
| Fr., . . . . . French.        | I. E., . . . Indo-European |
| Gr., . . . . . German.        | Kel., . . . Keltic.        |
| O. H. G., . Old High German.  | L., . . . . . Latin.       |
| Goth., . . . Gothic.          | O. L., . . . Old Latin.    |

|                          |                           |
|--------------------------|---------------------------|
| Lith., . . . Lithuanian. | Sp., . . . . Spanish.     |
| O. N., . . Old Norse.    | U., . . . . Umbrian.      |
| O., . . . . Oscan.       | O. U., . . . Old Umbrian. |
| O. O., . . Old Oscan.    | Wall., . . . Wallachian.  |
| O. P., . . Old Prussian. | W., . . . . Welsh.        |
| O. S., . . Old Saxon.    | Z., . . . . Zend.         |
| Skr., . . . Sanskrit.    |                           |

Sanskrit and Zend nouns are generally given in their crude forms, except when the case-ending is separated by a hyphen from the stem, or when the sign of equality is added, as in Skr. *as'vas* = L. *equus*. Curtius Essay "Zur Chronologie der Indo-Germanischen Sprachforschung," appears in the fifth volume, "der Abhandlungen der Philologisch-historischen Classe der Königl. Sächsischen Gesellschaft der Wissenschaften."

I refer to the second series of Max Müller's Lectures on the Science of Language, as Max Müller, Vol. II. K. Z. stands for Kuhn's "Zeitschrift für vergleichende Sprachforschung auf dem Gebiete des Deutschen, Griechischen und Lateinischen."

I have been delayed in the publication of this book for more than a year through a severe attack of illness.

The Second Volume of this Work will, I hope, be ready for publication in January, 1872.

WILLIAM HUGH FERRAR.

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# COMPARATIVE GRAMMAR.

## CHAPTER I.

### THE GENERAL ALPHABET.\*

§. 1. THE physiology of the human voice is the true basis upon which all inquiries into the origin of language and the mutual connexion of languages should be built. :

§. 2. All that the human ear is sensible of may be divided into *noises* and *sounds*. Examples of the former are the howling of the wind, and the splashing of water. Sounds, on the other hand, are produced by musical instruments or the human voice. Noises are caused by rapidly changing and irregular impulses communicated to the air; sounds, by its periodic vibrations. The human voice, which is only a stream of air, emitted from the lungs, becomes sound by the vibration of the vocal chords, which thus put the air passing through them into a state of vibration.

§. 3. An exact description of the vocal organs is not part of my present plan. For such a description I refer the reader

\* For further information on this subject the following works may be consulted:—"Essentials of Phonetics," by Ellis; Max Müller's "Survey of Languages," also his "Lectures on the Science of Language," Second Series; Lepsius' "Standard Alphabet;" "Grundzüge der Physiologie und Systematik der Sprachlaute," by Brücke; "die Lehre von den Tonempfindungen," by Helmholtz; also various articles, by Ebel and others, in Kuhn's Zeitschrift.

to any good book on anatomy ; merely adding, here, that the vocal organs may be said to consist of the *lungs*, which by being dilated or compressed act like a pair of bellows, the *windpipe*, the *larynx*, and the upper cavities of the *pharynx*, *mouth*, and *nose*. The larynx, the true organ of voice, is placed at the upper part of the windpipe. It is narrow and cylindrical below, but broad above, where it presents the form of a triangular box. Its cavity is traversed by an elastic membrane, which is divided into two parts, called the vocal chords, by a narrow fissure called the *rima glottidis*. When sound is produced, the vocal chords almost touch, and their edges at the same time vibrate, rapidly for high, and slowly for low notes. We see, then, that the vocal organs form a wind instrument, in which the vibrating apparatus consists of the vocal chords.

§. 4. In the impression made by a sound on the ear three things can be distinguished—*loudness*, *pitch*, and *quality*. The loudness depends on the amplitude of the oscillations of the vibrating body. The pitch depends on the duration of these oscillations. Now, notes of the same loudness and the same pitch can be produced by different musical instruments, and also by the human voice. The same note, however, of the violin differs from that of the trumpet, and that from the same note of the voice, and so on. This difference had already been supposed to depend solely on the form of the vibrations of the air, as it could not depend on either their amplitude or duration. This has now been proved directly by Helmholtz. The quality, therefore, is due solely to the form of the vibrations of the air.

#### §. 5. THE ELEMENTS OF LANGUAGE.

The phonetic elements (*στοιχεῖα*) are threefold—vowels (*φωνήεντα*), breathings, and consonants (*σύμφωνα*). The consonants are divided, according to their *duration*, into mutes and

semivowels, these latter including liquids (ὕγρα), nasals, and sibilants (flatus); according to their *hardness*, into surds (sharp, stosslaute, tenues, ψιλά, Skr. aghosha, vivâras'vâsâghosha), and sonants (blunt, drucklaute, mediæ, μέσα, Skr. goshavant, samvâranâdaghosha); and according to their *aspiration* into aspirated (δασία, Skr. mahâprâṇa) and unaspirated (Skr. alpaprâṇa). In Sanskrit the term *ûshman* is also applied to the sibilants and *h*, *spars'a* to the mutes and nasals, and *antahsthâ* to *y*, *r*, *l*, *v*, as intermediate between the former and the latter.

The mediæ differ from the tenues in this, that in the former the glottis is somewhat narrowed to enable it to sound.

The mediæ were so called because they were pronounced by the Alexandrian grammarians with more aspiration than the tenues, and with less than the aspirates. To us, however, and most probably to the Greeks of the classical period, *g* is as little aspirated as *k*.

The term consonant means "sounding along with," and, as Ellis writes, "is said to be given to these letters because they have no sound of their own, but sound\* with vowels." If, however, we consider *s*, *f*, *r*, &c., to be consonants, all consonants do not require the aid of a vowel to enable us to pronounce them; for we can pronounce the nasals, liquids, and sibilants without the help of any vowel. The Sanskrit name for a consonant is *vyañjana* (Sâv. 5: 25), from *vyañj'*, to make clear.

The Arabic grammarians call a vowel, *motion*, and a consonant, a *barrier*, because in forming vowels the voice is not interrupted, but only modified by the position of the tongue and lips, whereas in forming consonants the voice is stopped at certain fixed positions. Brücke, on the other hand, considers the vowel-signs to be properly marks of rest, and the consonantal signs to be marks of motion, because the

Ellis remarks (p. 57), that this definition reads very like a bull.

latter signifies both the closing of the barrier and the opening of it.

The consonantal signs were originally marks for syllables, as the Devanâgarî and Semitic alphabets prove.

## §. 6. THE VOWELS.

Vowels are composed of vocalized breath. The difference between the various vowels is due to the form of the vibrations of the air emitted from the lungs, which vibrations depend upon the form of the buccal tubes.\*

The three primary vowels are *A*, *I*, and *U*, pronounced as in German or Italian.

In forming *A* the mouth assumes a position gradually widening itself from the guttural point, like a funnel. The lips are in this position wide, and the tongue lies flat in the mouth.

*U* is formed by rounding the lips, so as to leave the opening between them as narrow as possible, and by drawing down the tongue, so that the cavity of the mouth is enlarged as much as possible. The mouth in this position is like a bottle without a neck.

*I* is formed by narrowing the lips and raising the tongue towards the hard palate. Thus a bottle with a narrow neck is formed, the body of which is in the throat, while the neck lies between the hard palate and the upper surface of the tongue. The length of this neck, according to Helmholtz, is six centimètres.

All the other vowels are formed between these three pri-

“In der That sind die Vocale der menschlichen Stimme Töne membranoser Zungen, nämlich der Stimmbänder, deren Ansatzrohr, nämlich die Mundhöhle, verschiedene Weite, Länge, und Stimmung erhalten kann, so dass dadurch bald dieser, bald jener Theil des Kluges verstärkt wird.” Helmholtz, p. 163.

mary ones. The following tabular view of them is that given by Brücke :—

|          |                      |                      |                       |                      |                      |          |
|----------|----------------------|----------------------|-----------------------|----------------------|----------------------|----------|
|          |                      |                      | <i>a</i>              |                      |                      |          |
|          |                      | <i>a<sup>e</sup></i> |                       | <i>a<sup>o</sup></i> |                      | .        |
|          | <i>e<sup>a</sup></i> |                      | <i>a<sup>oe</sup></i> |                      | <i>o<sup>a</sup></i> |          |
|          | <i>e</i>             |                      | <i>e<sup>o</sup></i>  |                      | <i>o<sup>e</sup></i> | <i>o</i> |
| <i>i</i> |                      | <i>i<sup>u</sup></i> |                       |                      | <i>u<sup>i</sup></i> | <i>u</i> |

In forming *o* we open the lips wider and elevate the tongue more than in forming *u*. In proceeding from *a* to *i* we gradually change the buccal tubes from the *a* to the *i* position; and similarly in proceeding from *a* to *u*. In forming *u<sup>i</sup>* we give the lips the *u*, and the tongue the *i* position; while in forming *i<sup>u</sup>* the lips take the *i*, and the tongue the *u* position. In *u<sup>i</sup>* the length of the canal, which was six centimètres in *i*, is now eight (Helmholtz, p. 170).

*a* is long in E. *farm*, *calm*, and short in E. *Sam*.

*i* is long in E. *wheel*, *ravine*, and short in E. *knit*.

*u* is long in E. *flute*, *fool*, and short in E. *full*.

*a<sup>e</sup>* is the German *ä*, the French *é*. It is short in the Cockney pronunciation of *man*, *fat*.

*a<sup>o</sup>* is long in E. *nought*, *water*, and short in E. *hot*, *not*.

*e<sup>a</sup>* is the German *e* in *echt*, the French *è*.

*a<sup>oe</sup>* occurs in Fr. *veuve*, *sœur*, *peur*.

*o<sup>a</sup>* is heard in the Fr. *encore*.

*e* is long in G. *ewig*, E. *hay*, and short in G. *merden*.

*e<sup>o</sup>* is a common sound in the Wallachian language. Brücke says that it is heard in G. *zwölf*.

*o<sup>e</sup>* is the G. *ö* in *König*, Fr. *peu*.

*o* is long in E. *ago*, and short in G. *sonne*.

*i<sup>u</sup>* is heard in G. *Myrte* and *Physik*. It is the Slavonic hard *i*. This sound is of Tataric origin, and traces of it are still found in the Dravidic languages of Southern India.

*u<sup>i</sup>* is the G. *ü*, long in *Thür*, and short in *dürr*. It is

the Fr. *u* in *sûr* and *sur*. It is also the Dutch *uu* and the Scotch *ui*.

Lepsius inserts another vowel sound between *a<sup>e</sup>* and *a<sup>o</sup>*, which, he says, is heard in the E. *but*, *son*.

### §. 7. THE ORIGINAL VOWEL.

In addition to the vowels noticed in the last section, we have another vowel, called variously, the *indefinite*, or *neutral*, or *original* vowel, *Urlaut*, *Urrocal*. This is a sound that exists in all languages, and from it, according to Ellis, all the other vowels are derived. Willis says that it 'seems to be the natural vowel of the reed.' All unaccented vowels in our European languages have a tendency to return to this sound; e. g. E. *beggar*, *nation*, *Paddington* (for -town), G. *lieben*, Fr. *tenir*. This vowel sound is formed by leaving the tongue in its most natural position, opening the mouth easily, and emitting vocal breath. Lepsius says that this sound comes among the clear sounding vowels next to *a<sup>o</sup>*, but that it is capable of various shades, sometimes approaching *a*, sometimes *e*, *i*, *o*, *u*, being distinguished from all these by the absence of that clear resonance, which is lost by either partially closing or shutting the mouth. The French *e muet* and the Welsh *y* approach this sound very nearly. Brücke considers that Lepsius is wrong in stating, that this vowel is inherent in all soft fricatives and nasal explosives,\* for the indistinct vowel sound here is merely the tone of the voice. Moreover, the only actual examples of the amalgamation of a vowel and consonant are *uw* and *iy*.

Max Müller is wrong in supposing that we hear this sound in E. *el-m*, *mar-sh*; for, in proceeding from *l* to *m*, or *r* to *sh*, we do not require to interpose any vowel.

\* These terms will be explained farther on.

This indistinct vowel, when combined with *r* and *l*, forms the two Sanskrit vowels *ṛ* and *ḷ*. This Sanskrit vowel *ṛ* differs from E. *r*, as heard in *her*, *steward*, in this, that it is pronounced at the cerebral,\* whereas the E. *r* is pronounced at the guttural point of the mouth.

### §. 8. THE NASAL VOWELS.

The nasalization of the vowels is produced by allowing the air to vibrate in the nasal cavities as well as in the mouth. The air need not pass through the nose, for by closing the nose we may increase the nasal twang.

Nasalization is an alteration solely within the vowel itself, no consonantal element being brought into play. This, as Lepsius points out ("Standard Alphabet," p. 9), was rightly understood by the Indian grammarians, who express the nasalization by a vowel-like sign, viz., a dot over the letter. It is theoretically possible to give all the vowels the nasal twang, but few receive it. Miklosich remarks that in all the languages known to him, only *a*, *a<sup>e</sup>*, *o<sup>e</sup>*, and *o* were nasalized. Ellis says that the Portuguese have both a nasal *i* and a nasal *u*vocal.

### §. 9. DIPHTHONGS.

When two vowels follow each other so rapidly as to melt into one sound, we obtain a diphthong. Now, we know that *a* is formed at a point in the mouth before *i* and *u*, and therefore it alone of the three primary vowels can form a true diphthongal base. Moreover, as *e* and *o* are also formed in the mouth farther back than *i* and *u*, they may serve as bases. We can make *a* both long and short. We have, therefore, eight proper diphthongs, which are moreover capable of receiving different shades of pronunciation.

\* These terms will be explained further on.

We see at once that we cannot form any proper diphthongs with *i* and *u* as bases; for if we try to pronounce *ia* and *ua* very rapidly we do not form diphthongs, but merely the syllables *ya* and *wa*. In Welsh we find the improper diphthongs *iu* and *ua*, and in French we find improper *u* diphthongs frequently as in *oui*, which is not pronounced as *we* in English.

### §. 10. THE BREATHINGS.

These are classed by some writers among the consonants, as by Lepsius, who gives them the name Faucal,\* and classifies them thus:—

*Explosive fortis*, Arabic ξ, *ain*.

*Explosive lenis*, Arabic Hamzeh, Greek *Spiritus Lenis*.

*Fricative fortes*, Arabic τ, *hha*, and English *h*, as in *hand*, which is not as strong an aspiration as *hh*.

There can be no nasal breathing, for the canal of the nose is closed during the formation of a Faucal sound.

Ellis and others separate the breathings from the consonants, and form them into a distinct class.

The pure aspirate, however, as I believe, does not belong to any special organ, though it appears to have some connexion with the gutturals. Accordingly, while we find *h* representing frequently an original *gh*, we sometimes find it developed from an original *dh* and *bh*.

### §. 11. THE CONSONANTS.†

These are produced under the following conditions:—

A. No air is allowed to pass into the nasal cavities, and the canal of the mouth is closed at some definite point. Thus are formed the *Explosive* sounds, both *tenues* and *mediæ*.

\* See Brücke in K. Z. vol. xi., p. 265.

† In this section I have followed Brücke very closely.

B. The air is still prevented entering the nasal cavities; but, in place of closing the canal of the mouth at any point, a narrow passage is left, so that the air comes forth with a sound of friction. Thus are formed the *Fricatives*, including *h, y, v* and the *Sibilants*. The *L*-sounds are fricatives; but they differ from the other letters of this class in this, that the passage for the emission of the air does not lie in the centre of the canal of the mouth, but on each side, between the edges of the tongue and the grinders.

C. The nasal cavities are still closed, but some portion of the canal of the mouth is made to vibrate, thus causing the vibration of the air passing out. Thus arise the *R*-sounds.

D. The mouth is closed, and the nasal cavities are open. Thus we have the *Resonants*, or *Nasals*. The nasals and vowels are the sounds easiest to be heard from a distance. Thus words such as *Mamma, mine, no*, can be heard very far away.

§. 12. The four classes are divided again, under three heads, according to those parts of the canal of the mouth that approach each other.

I. The under lip may approach the upper lip or the upper teeth. These sounds are the *Labials*. They are the most constant sounds in all languages.

II. The fore part of the tongue may approach the teeth or the palate. These sounds are the *Dentals* and *Cerebrals*. Bühler has demonstrated that the existence of the cerebrals in Sanskrit is not due to Dravidian influences, but that they were independently developed in that language. The Arabic linguists differ from the Sanskrit cerebrals solely in this, that in the latter the tongue is more contracted than in the former. The name cerebral is not quite correct, but its use has become so general that it is better to retain it. The Sanskrit name for these letters is *mûrddhanya*, from *mûrddhan*, which means the highest point in the roof of the palate, and not the brain.

It is absurd to say that any letter is pronounced in the brain (cerebrum).

\* III. The middle or hinder part of the tongue may approach the palate. Thus we have the *Palatals* and *Gutturals* (Skr. g'ihvâmûliya). The term guttural\* is not exactly correct, for these letters are not produced in the *guttur*, but by contact between the tongue and the *soft* palate. By pushing this point of contact forwards to the *hard* palate, we get the palatals. These palatal sounds have a tendency to assume a shade of *y*, which frequently becomes independent, and develops itself into a full *y*. This is easily accounted for by the fact that in the palatals the tongue is raised very nearly into the *y*-position. Thus we can explain the fact that original gutturals often become sibilants; for the guttural *k* became the palatal; this again became *ky*, this *ty*, this *ts*, and sometimes *s*. For example, the L. *cantus* became E. *chant* (palatal tenuis), and Fr. *chant* (palatal sibilant); L. *canis*, Fr. *chien*; L. *quatuor*, Skr. *k'atvâr*; L. *que*, Skr. *k'a*; Gr. κοῖλον, L. *cælum*, It. *cielo*; L. *caseus*, E. *cheese*; L. *causa*, Fr. *chose*.

This tendency of the palatals to develop *y* after themselves also explains how an original guttural sometimes becomes a dental; thus τίς has been developed from κίς the groundform of which was *kvas*, whence Skr. *ka-s*, Goth. *hras*, L. *quis*; similarly τέσσαρες is derived from an original *k'atvâras*, whence come L. *quatuor*, Skr. *k'atvâr*, Lith. *keturi*, &c.

“Such transitions,” writes Lepsius (“Stand. Alph.,” p. 72), “in the history of languages never take place suddenly, but always gradually. It is a very common phenomenon that the explosive letters first produce the corresponding fricative sounds behind them, and afterwards pass entirely into them,

\* Consult a paper by Lepsius in K. Z. vol. xi., p. 442.

and that at the same time the gutturals advance constantly towards the anterior part of the mouth."

### §. 13. THE LABIALS.

#### A. *The Explosives.*

The *jenuis* *p* (*p*<sup>1</sup>) is formed by simple contact of the lips : it is a surd consonant, for the glottis is wide open. The media *b* (*b*<sup>1</sup>) is formed similarly, except that now the glottis is narrowed. In modern Greek, where  $\beta$  is pronounced as *v*, the sound *b* is expressed by  $\mu\pi$ , where  $\mu$  merely tells us that the glottis is now contracted ; similarly *ντ* is used to express the sound *d*. Thus, *barber* would be written  $\mu\acute{\alpha}\rho\mu\pi\epsilon\rho$ , and *dreadful*  $\nu\tau\rho\acute{\epsilon}\iota\tau\phi\omicron\upsilon\lambda$ , for  $\nu\tau\rho\epsilon\nu\tau\phi\omicron\upsilon\lambda$ .

We can form a second *p* (*p*<sup>2</sup>) by bringing the upper lip and lower teeth together.

#### B. *The Fricatives.*

*F* is formed by bringing the under lip towards the upper teeth (*f*<sup>2</sup>) ; or by bringing the lips towards each other (*f*<sup>1</sup>). *V* is related to *f*, exactly as *b* is to *p*. *F*<sup>2</sup> is the *f* in *life* ; *v*<sup>2</sup> is the *v* in *live*. Brücke says that we find *v*<sup>1</sup> in G. *quelle*, and *v*<sup>2</sup> in G. *wie* ; but Ellis separates the sounds of the G. *w* and E. *v* from each other. The former he writes, 'v, and thus describes its formation—"the lips are brought into the position for *w*, and the contact at the edge is slackened, while the inner surfaces are brought close together and flattened." The E. *w*, he says, arose from a cross between this 'v and the Fr. *u*. No other European language possesses the E. *w*, and hence it has been supposed by some that this *w* is properly the vowel *u*. But this is wrong ; for we can make this sound surd in *wheel*, *which* ; and the fact that the words *woo* and *wood* are monosyllabic proves that *w* is a true consonant.

C. *The R-sound.*

If we place the lips in the  $p^1$  position and then let them vibrate, we form two sounds, the one surd, and the other sonant, which are related to each other as  $p$  to  $b$ . We find this labial  $r$  in the Kretan  $\tau\rho\acute{\epsilon}$  for  $\tau\rho\epsilon$  = Skr. *trām*, in  $\delta\epsilon\delta\rho\omicron\iota\kappa\acute{\omega}\varsigma$  for  $\delta\epsilon\delta\text{F}\omicron\iota\kappa\omega\varsigma$ , unless  $\delta\epsilon\delta\rho\acute{\omicron}\kappa\omega\varsigma$ , i. e.  $\delta\epsilon\delta\omicron\rho\kappa\acute{\omega}\varsigma$ , be the correct reading, in Kr.  $\rho\acute{\iota}\gamma\alpha$  ( $\sigma\acute{\iota}\omega\pi\alpha$ ) for  $\sigma\rho\iota\gamma\alpha$  from  $\sigma\text{F}\iota\gamma\alpha$ , and perhaps in  $\acute{\alpha}\tau\rho\epsilon\gamma\kappa\tau\omicron\varsigma$  ( $\acute{\alpha}\beta\rho\omicron\chi\omicron\varsigma$ ) from  $\tau\acute{\epsilon}\gamma\gamma\omega$ , if Goth. *thraha* be from same root. This  $r$  only appears in Greek in the Kretan dialect. In the following Latin words  $r$  has perhaps been developed out of an original  $v$ :—L. *cras* = Skr. *s'ras*, L. *creta* beside Skr. *s'veta* (white), L. *creresco* beside Skr. *s'vi* (to increase). This interchange of  $r$  and  $v$  occurs also in some German dialects (see K. Z., vol. xv., p. 320).

D. *The Resonants.*

If we close the lips as in  $b^1$ , and allow the air to vibrate in the nasal cavities, we form  $m^1$ .  $M^2$  is not used: The nasals are closely connected with the mediæ— $m$  with  $b$ ,  $n$  with  $d$ , and  $\tilde{n}$  with  $g$ . Hence we find L. *flamma* for *fluñma* from *flagma*; Sp. *Inez* for *Agnes*, L. *hibernus* beside  $\chi\epsilon\iota\mu\epsilon\rho\iota\nu\acute{\omicron}\varsigma$ ; L. *puber* beside Skr. *pumāns*. In northern climates the nasals are frequently omitted; as in Ir. *coic* (quinque), *cet* (centum), O. N. *gécck* for *génck*.

## §. 14. THE DENTALS AND CEREBRAIS.

A. *The Explosives.*

By pressing the fore part of the tongue against the palate and teeth we form a  $t$ -sound, of which there are four kinds.

T<sup>1</sup>. *Alveolar*. The sides of tongue touch the upper grinders, and the point of tongue lies on upper internal gums, thus forming an air-tight receptacle.

T<sup>2</sup>. *Cerebral*. The tongue is now convex, and its lower side touches the palate. This *t* has been called *lingual*; but I prefer the term *cerebral*, because the other term is applied in Arabic to a different class of letters, and moreover it does not suffice to distinguish this sound, as all *ts* are pronounced by means of the tongue.

T<sup>3</sup>. *Dorsal*. The tongue is still convex, but its upper side now touches the palate, and its tip rests on lower teeth.

T<sup>4</sup>. *Dental*. The tongue now merely touches the teeth.

We have four *ds* related to these four *ts* as *b* is to *p*.

### B. *The Fricatives.*

We have four *ss* related to the four *ts*, as *f* is to *p*, and four *zs* related to the four *ss* as *v* is to *f*.

S<sup>1</sup> is the Arabic *Sad*, and is nearly the same as the *s* in E. *sin*, *seal*.

S<sup>2</sup> is a more rushing sound than *s*<sup>1</sup>.

S<sup>3</sup> is the sharp hissing *s* in E. *sharp*, Fr. *chose*.

S<sup>4</sup> is the E. *th* in *thin*, the Mod. Gr. *θ*. This *θ* has become *f* in Russian: this change is easily explained, for the edge of the upper teeth, which in *θ* lies between point of tongue and under lip, now merely has to approach the latter.\*

Z<sup>1</sup> is the Arabic *za*, and is nearly the same as *z* in E. *breeze*.

Z<sup>3</sup> is found in E. *pleasure*, *giraffe*, Fr. *jeune*, according to Lepsius.

Z<sup>4</sup> is E. *th* in *other*, Mod. Gr. *δ*. In English, when *z*<sup>4</sup> is initial, we generally say *d*<sup>4</sup>*z*<sup>4</sup>; and when it is final, *z*<sup>4</sup>*s*<sup>4</sup> instead of it; thus, for *breathe* we say *breaz*<sup>4</sup>*s*<sup>4</sup>, and not *breaz*<sup>4</sup>. In this respect the Spanish pronunciation of *z*<sup>4</sup> differs from ours; for final *z*<sup>4</sup> in Spanish is always pronounced purely. Neither *s*<sup>4</sup> nor *z*<sup>4</sup> exists in Sanskrit.

\* Consult a paper by G. Michaelis, in K. Z., vol xiii., p. 223.

If in the four *t*-positions we allow an opening to be left at each side of the tongue between its edges and the grinders, we form from the four *ts* four *λs*, and from the four *ds* four *ls*.

L<sup>1</sup> is the common *l* in E. *leave*.

L<sup>2</sup> is the Vedic *l*.

L<sup>3</sup> occurs in *l mouillé*.

L<sup>4</sup> is used by those who lisp.

L<sup>1</sup> often becomes vocal in English, as in *apple*, *double*, which Ellis writes *ap'l*, &c. The surd λ<sup>1</sup> is unknown in English, but is very common in Welsh, where it is written *ll*, as in *Llangollen*. This surd λ<sup>1</sup> takes the place of *le* in conversational French, in such words as *able*, *possible*, which Englishmen pronounce as *ab'l*, &c. This *ll* is Ellis' whispered *l*. In his terminology, *surd* consonants are *whispered*, and *sonant*, *spoken* or *voiced*. Whisper differs from voice solely in this, that in whispering there is no vibration of the vocal chords, whereas in voice there is.

### C. The *R*-sound.

The alveolar *r*, when sonant, is our common *r*. When surd, it occurs in Welsh, and in French as in *tendre*. This surd *r* is scarcely to be distinguished from *s*, the only difference being a small ripple of the whisper. This accounts for the fact that *s* and *r* frequently interchange (Ellis, p. 50).

The Sanskrit grammarians treat *r* as a cerebral, and therefore deduce it from *dʰ*; but they are wrong, for it is impossible to make the tongue vibrate from the cerebral position.

As they did not distinguish the alveolar position, they had to treat *r* as either a dental or a cerebral; and they chose the latter, probably on account of the point of the tongue being directed upwards (Brücke, p. 42).

### D. The *Resonants*.

We have four *ns*, corresponding to the four *ds*, exactly as *n* to *b*. N<sup>3</sup> is contained in *n mouillé*.

## §. 15. THE GUTTURALS AND PALATALS.

A. *The Explosives.*

In forming *k* the middle or hinder part of the tongue touches the middle or hinder part of the palate, while in forming *t* the fore part of the tongue touches the fore part of the palate. Hence the articulation of *t* begins where that of *k* ends; yet in the cerebral *t* we may go backwards across the *k* limit, and still pronounce a *t*. This, however, cannot be done in the case of the dorsal *t*. Two *ks* may be formed—one on the hard palate (*k<sup>1</sup> palatale*), and one on the soft palate (*k<sup>2</sup> velare*).

The It. *ch*, in *chiesa*, *chiaro*, is formed at the front limit of the hard palate; the Arabic *Kaf* at the hinder limit, and the G. *k*, in *wickeln* between these two. The *k<sup>2</sup>* in G. *stock* is formed at front limit of soft palate. The Arabic *Kaf* is formed farther back than any other *k* sound.

*G<sup>1</sup>* and *g<sup>2</sup>* are related to *k<sup>1</sup>* and *k<sup>2</sup>*, as *b* is to *p*. *G<sup>1</sup>* is the It. *gh* before *i*; the G. *g* in *geben* is formed a little farther back than It. *g*, but it is still palatal.

B. *The Fricatives.*

In these the stream of air strikes the palate, as in the *s* sounds it struck the teeth. They are related to the *k* sounds as *f* is to *p*.

The palatal flatus, *χ<sup>1</sup>*, is the G. *ch* after *e* and *i*, as in *Recht*, *ich*, and the Mod. Gr. *χ* before *i* as in *χείρ*. The initial sound of the E. *hew*, *Juman* very nearly approaches this *χ<sup>1</sup>*. This is the whispered form of the *y* in E. *yea*, *year*.

The guttural flatus is the G. *ch*, after *a*, *o*, *u*, the Mod. Gr. *χ* before *a*, *o*, *u*, *ω*.

Another *χ* sound, *χ<sup>3</sup>* can be formed so far back that no *k* sound corresponds to it. This is the Swiss *ch* in *ach*, and is common in Arabic.

There are three *ys*, related to the three *xs* exactly as *w* is to *f*.

*Y*<sup>1</sup> occurs in E. *yea*; and *y*<sup>2</sup> is the G. *g* in *Tage*, *Lüge*, and the Mod. Gr. *γ* before *a*, *o*, *ω*.

### C. The R-sound.

If we make the uvula vibrate, we form the *uvular r*. This is distinguished from the dental *r* by the fact, that in the latter it is the tip of the tongue that vibrates. The *l* and *r* sounds are commonly called *Trills*. They differ in this, that in the *rs* the stream of air is periodically *interrupted*, but in the *ls* there are no interruptions, but merely *oscillations* produced in the emitted air.

:

### D. The Resonants.

We form two *ns* (*ν*<sup>1</sup>, *ν*<sup>2</sup>), related to *g*<sup>1</sup> and *g*<sup>2</sup> as *m* is to *b*. *ν*<sup>1</sup> occurs in G. *Bengel*; *ν*<sup>2</sup> in G. *Wange*.

The French *n* in *un*, *en*, is now merely a sign of the nasalization of the preceding vowel, and is therefore no consonant at all. From a comparison, however, with Latin and Italian, we see that it has been developed out of an *n* sound which was neither *ν*<sup>1</sup> nor *ν*<sup>2</sup>, but *ν*<sup>3</sup>.

## § 16. THE ASPIRATES.

These are classed by some writers among the fricatives, by others among the explosives. They are, according to Lepsius, "those explosive sounds which are pronounced with a simple but audible breath." Three different methods of pronouncing the *tenuēs aspiratæ* have been proposed:—(1), the *tenuis* and *spiritus asper* may be pronounced separately; (2), the *spiritus asper* may be changed into the corresponding *flatus*, and then *ph*, *th*, *kh*, become *pf*, *ts* and *kch*, respectively;

(3), the tenuis and the spiritus asper may melt into one sound. The first of these methods is said to prevail at present among the Brahmans ; it is compared to the pronunciation of *ph*, *th*, and *kh*, in the English words *haphazard*, *anthill*, *inkhorn* ; but this is incorrect—for in these words the tenuis and the spiritus asper belong to different syllables, whereas in Sanskrit they belong always to the same syllable.

The *mediæ* are aspirated by allowing the spiritus lenis to be heard immediately after the explosion. In Sanskrit the *mediæ aspiratæ* were always pronounced as one sound ; for we find words beginning with the following combinations, *ghn*, *dhm*, *ghr*, &c.

We must carefully remember that the Sanskrit *h* does not form part of the aspirated tenuis ; for it is a sonant letter, and therefore cannot form part of the aspirated tenuis, which is surd.

The original aspirates in process of time lost their true character, and gradually changed into other sounds. Thus, in Greek, they became the corresponding fricatives ; e. g.  $\chi$ , which was originally a tenuis aspirata, became the fricatives,  $\chi^1$  and  $\chi^2$ .

## §. 17. CONCRETE CONSONANTS.

These are those sounds which are formed by the vocal organs being placed at the same time in two different consonantal positions. The G. *sch* and the Fr. *j* are concrete consonants. These concrete sounds are perfectly distinct from groups of consonants, such as *x*,  $\psi$ , which Brücke calls *compositæ*. The G. *sch* is equivalent to  $[s^1\chi^1]$  : we first place the vocal organs in the  $\chi^2$ -position, and then bend the tongue upwards into the  $s^1$ -position. The It. *c* in *ciceri* is equivalent to  $t^1 [s^1\chi^2]$ , while the E. *ch* in *church* is more nearly  $t^1 [s^1\chi^3]$ . The Fr. *j* in *jamais* is related to the G. *sch* as *b* is to *p*. It is therefore  $[z^1y^2]$ . The E. *j* in *joy* is similarly related to the

It. *c* in *ciceri*. It is therefore *č*<sup>1</sup> [*z*<sup>1</sup> *y*<sup>2</sup>]. Max Müller differs from these views of Brücke; he says that *ch* in *church* does not consist of two consonants, but merely of half *t* and half *sh*, and therefore that it is merely equivalent to one whole consonant.

## CHAPTER II.

## THE INDO-EUROPEAN LANGUAGE.

§. 18. THIS is the name given to that language from which the whole family of the Indo-European languages are derived, and which therefore stand to it in the same relation as the Romance languages do to the Latin. As we could approximate to the roots and grammatical forms of the Latin language, even if we had no monuments of it, from a comparison of the roots and grammatical forms at present existing in the Romance languages, so analogously we may approximate to the roots and forms of the language of the Indo-Europeans from a comparison of the languages spoken by their descendants. For example, if we take the case of the numerals, we see at once that the names for the first ten numbers in any Romance language are not derived from those in any other, but from the Latin. The Sp. *ocho*, Port. *oito*, It. *otto*, Wall. *optu*, Fr. *huit*, are all formed independently of each other from the L. *octo*; and if the L. *octo* did not exist, we could infer its existence from a comparison of these forms with each other. Similarly the Skr. *kātvāras*, Gr. *τέσσαρες*, Æol. *πίσσαρες*, L. *quatuor*, Umb. *petur*, Ir. *ceathair* (m.), *ceteora* (f.), Welsh *pedwar* (m.), *pédair* (f.), Goth. *fidvôr*, Lith. *keturi*, &c., are all independent of each other, but they all presuppose an Indo-European form *kvatvāras*, which is nearly the same as the L. *quatuor*.

§. 19. The sounds that in all probability existed in this language, immediately before the separation of the Asiatic branch from the European, are given in the following table :—

| MUTES. |          |          |           | SEMIVOWELS. |          |          |                 | VOWELS       |
|--------|----------|----------|-----------|-------------|----------|----------|-----------------|--------------|
|        | unaspr.  |          | aspr.     | Spirants.   |          | Nasals.  | R-sound.        |              |
|        | surd.    | son.     | son.      | surd.       | son.     | son.     | son.            |              |
| Gutt.  | <i>k</i> | <i>g</i> | <i>gh</i> |             |          | <i>ñ</i> |                 | <i>a, ā</i>  |
| Pal.   |          |          |           |             | <i>y</i> |          |                 | <i>i, î</i>  |
| Cer.   |          |          |           |             |          |          | ( <i>r l</i> )? |              |
| Dent.  | <i>t</i> | <i>d</i> | <i>dh</i> | <i>s</i>    |          | <i>n</i> | <i>r l</i>      |              |
| Lab.   | <i>p</i> | <i>b</i> | <i>bh</i> |             | <i>v</i> | <i>m</i> |                 | <i>u, ū.</i> |

At an older period the I. E. possessed probably no aspirates, and only the single vowel *a*, *i* and *u* being subsequently developed out of this *a* on the one side, and from the vocalization of *y* and *v* on the other.

The representation of an original *a* by *a*, *e*, and *o* distinguishes the European branch of the Indo-European from the Asiatic; thus we have, in the following cases, *a* in Sanskrit and Zend, and *e* or *i* in Greek, Latin, &c.; Skr. and Z. *das'an*, Gr. *δέκα*, L. *decem*, O. H. G. *zehan*; Skr. *sad*, Z. *hud*, Gr. *ἔδος*, L. *sedeo*, Goth. *sita*; Skr. *madhya*, Z. *maidhya*, Gr. *μέσος*, L. *medius*, Goth. *midjis*. This change of *a* into *e* and then into *i* occurred in very early times, while the change into *o* and then into *u* is much later. This change is believed by Curtius\* to have arisen at a time when the North-European branches had separated from the Southern ones; for the Greek and Latin frequently agree in representing an original *a* by *o*, in cases where the Gothic, Lithuanian, &c., preserve the *a*, or change it to *i*; as in

Gr. *γινώσκω*, L. *gnosco*, O. H. G. *knâu*.

Gr. *ὄϊς*, L. *ovis*, Goth. *avistr*.

Gr. *ὀκτώ*, L. *octo*, Goth. *ahtau*.

Gr. *δῶμος*, L. *domus*, A. S. *timber*, O. H. G. *zimbar*.

In this respect the Keltic languages are more akin to the Greek and Latin than to the languages of Northern Europe. When *e* and *o* had been developed out of *a*, the greater num-

\* Curtius, "Grundzüge," p. 85.

ber of the Greek dialects made no further change; but the Æolic dialect and the Italic languages frequently change this *e* and *o* into *i* and *u*.

§. 20. The Guttural *ñ* is an uncommon sound, and only occurs before gutturals. *M* is an older sound than *n*: thus, Skr. *damam* (acc. sing.) and L. *domum* are older than Gr. *δόμον*, and L. *decem* than Skr. *das'an*. The change of *m* into *n* is very common: thus G. *boden* comes from O. H. G. *bodam*, Fr. *rien* from L. *rem*, It. *con* from L. *cum*, Fr. *nappe* from L. *mappa*, Wall. *furnice* from L. *formica*.

The converse of this change seldom occurs; but, as it is sometimes found in modern languages, as in E. *ransom* from Fr. *rançon*, we may from analogy infer that a similar interchange between *m* and *n* existed in the Indo-European.

§. 21. From the number of cases in which *l* in Sanskrit corresponds to *l* in the European languages, we infer that *l*, as well as *r*, existed, in the Indo-European, although the *r*-sound vastly predominated. Thus we have,

Skr. *kalya*, Gr. *καλός*, Goth. *hails*, E. *whole*.

Skr. *sphal*, Gr. *σφάλλω*, L. *fallo*, O. H. G. *fallan*.

Skr. *mala*, Gr. *μέλας*, L. *malus*, Goth. *mail*.

Skr. *lis'*, Gr. *ὀλίγος*, Goth. *leihts*.

Skr. *lū*, Gr. *λύω*, L. *veluo*, Goth. *luis* (loose).

Skr. *lubh*, Gr. *λίπτομαι*, L. *lubet*, Goth. *liubs*.

Skr. *lōta* (loot), Gr. *λεία*, L. *lucrum*, Goth. *laun*.

Skr. *lash*, Gr. *λάω*, L. *lascivus*, Goth. *lustus* (lust).

On the other hand, there are many roots in which the European languages present *l* where the Sanskrit has *r*; thus,

Skr. *úrmi* (a wave), Gr. *ἐλύω*, L. *volvo*, Goth. *valvjan*.

Skr. *par*, Gr. *πλήρης*, L. *plenus*, Goth. *fulls*.

Skr. *ruk'*, Gr. *λευκός*, L. *luceo*, Goth. *liuhath*.

Skr. *rik'*, Gr. *λείπω*, L. *linquo*, Goth. *laiba*.

This is one of the facts from which Lottner (K. Z., vol. vii., p. 19), infers that, after the Europeans separated from the

parent stock, they remained for some time united together as one people.

*R* always has had a tendency to become *l*, as we see from the Romance languages: thus, It. *albero* comes from L. *arbor*, It. *célebro* from L. *cerebrum*, Fr. *autel* from L. *altare*, It. *pellegrino* from L. *peregrinus*. The reverse change also occurs, but much less frequently: we find it in Fr. *rossignol* from L. *luscinolus*, Fr. *apôtre* from L. *apostolus*, Fr. *chapitre* from L. *capitulum*, Fr. *esclandre* from *σκάνδαλον*, Wall. *poporu* from L. *populus*, Wall. *jiru* from L. *filum*. In some of these cases dissimilation has favoured this change.

## §. 22. THE INDO-EUROPEAN *B*.

The chief proof that *b* existed in the Indo-European is the fact that it forms the chief element in the original sound *bh*. That it must have had a very limited sphere, is proved by the few cases in which it seems to be original. These cases are the following:—Gr. *βραχύς*, *βρόγχος*, Goth. *praggan* (to press), the fundamental idea being “narrowness;” Skr. *lamb* (to fall), L. *labi*, E. *slip* (Bensley compares E. *limp*), Goth. *slēpan* and E. *sleep* come perhaps from this root, the fundamental idea being that of “sinking down to rest;” Gr. *κάνναβις*, O. H. G. *hanf*, E. *hemp*; Skr. *kubg'a* (crooked), Gr. *κύβος*, Goth. *hups*, O. H. G. *huf*, L. *cubare*, E. *hip* and *hump*; Gr. *ρόμβος*, *ρέμβω*, Goth. *vairpan*, G. *werfen*.\* *B* is original in some imitative words; but, as Grimm’s law does not apply to such words, it remains unchanged: thus we have Gr. *βληχή*, L. *balare*, O. H. G. *blāzan*, E. *bleat*; Skr. *barbara*, Gr. *βάρβαρος*, L. *balbus*, E. *babble*; Gr. *βουβλίς*, L. *bullire*, E. *bubble*.

Initial *b*, as Grassmann has pointed out, has generally in Sanskrit, Greek, and Latin, been developed from other sounds: in Sanskrit from *p*, *bh*, *m*, and *v*, as *banig'* (a merchant) from

\* Consult Bickell in K. Z., vol. xiv., p. 425; and Grassmann in K. Z., vol. xii., p. 122.

*pan* (to buy), *bal* from *bhal*, *brû* from *mrû*, and *bat* from *vat*; in Greek and Latin from *gv*, as in Gr. *βαρύς*, *βαίνω* = L. *venio* for *gvenio*; from *dv*, as in L. *bis*, *bellum*, *bonus*; from *v*, as in Gr. *βούλομαι* (Skr. *vr̥*, L. *volo*), *βρίζα*; from *m*, as in Gr. *βροτός*, *βλώσκω*, *βραδύς* = Skr. *mṛdus* (mild and slow) = L. *blandus* for *mlandus* (E. *mild*); *bucca* (Skr. *mukha*); from *bh*, as in Gr. *βρέμω*, L. *fremo*, *βασκαίνω*, L. *fascino*; and from *p*, as in Gr. *βόσκω* (?), L. *bibo*, *buxus*.

§. 23. Wherever we find fricative sounds corresponding etymologically to explosive, we believe that the latter are original, as they require a stronger articulation than the former. We find examples of this in the following changes:—*t* becomes *s*, in Gr. *σύ*, Dor. *τύ*, L. *tu*; *d* becomes *l*,\* in L. *lacruma* = Gr. *δάκρυ*; L. *levir* = Gr. *δαήρ*, Skr. *devṛ* (a husband's brother); L. *calumitas*, from an older *cadamitas*; *d* becomes *r* in L. *arvorum* = *advorsum*, L. *meridies* for *medidies*, Sp. *lampara* from acc. sing. of L. *lampas*; *b* becomes *v* in Fr. *avoir* = L. *habere*; *k* becomes a sibilant in Fr. *cent* from L. *centum*, Skr. *das'an* from I. E. *dakam*, Skr. *s'van* from I. E. *kṣan*, Fr. *cheval* from L. *caballus*. The modern Greek spirants have been developed from the old aspirates, and the Latin spirants *h* and *f* from the old *gh* and *bh*.

There are some exceptions to this law: thus *gv* has been developed from *v* † in It. *golpe* from L. *vulpes*, Fr. *gâter* and It. *guastare* from L. *vastare*, Fr. *guêpe* from L. *vespa*. *V* has become *p* on account of the *s'* in Z. *s'pā* = Skr. *s'vā*. In the Lesbian dialect we find *β* for *F* before *ρ*; here either *F* became *β*, or else *β* was pronounced as *F*. The Romans disliked the group *vu*, and frequently used *bu*, as in *ferbui* from *ferveo*; similarly the Greeks said *βούλομαι* for *Fουλομαι*. *D* represents

\* In the "Rigveda" the symbol **Ḍ** is employed to represent the *l*-sound, into which an older *d* is sometimes changed. This sound must have been either *dl* or *ld*.

† See Max Müller, vol. ii., p. 265, *seq.*; and Curtius, "Grundzüge," pp. 386, 527.

an older *l* and *r* in some Norwegian dialects; thus in Sogndal *ll* becomes *dl*, as in *kadla* for *kalla*, *gudl* for *gull*, &c. In Danish we have *ld* for *ll*, as in *fuld* = E. *full*; and *fald* = E. *fall*.

§. 24. That the *weak* aspirates existed in the Indo-European, is proved by the fact that the Sanskrit *weak* aspirates are represented in Zend by the mediæ and mediæ aspiratæ; in Slavic, Lettic, Gothic, and Irish, by the mediæ; and in Latin sometimes by the mediæ. Thus, we have Skr. *dhû* (to place), Z. *dû*, L. *do* (in *condo*), Lith. *dedù* E. *do*, *doom*; Skr. *bhar* (to bear), Z. *bax*, L. *fero*, Goth. *baira*, Lith. *bérnas* (a child), E. *burden*; Skr. *bhû* (to be), Z. *bû*, L. *fui*, Lith. *bûti* (to be), E. *be*; Skr. *bhrâtar*, Z. *brâtar*, L. *frater*, Goth. *brôthar*, Ir. *bráthir*; Skr. *madhya*, Z. *maidhya*, L. *medius*, Osk. *me-fiai* (= *mediæ*), Ir. *medón*, Goth. *midjis*; I. E. *dnambhas*,\* Skr. *naḥbas*, L. *nubes*, Sl. *nebo*, Ir. *neamh*, Lith. *debesis*. These examples are sufficient to prove the original existence of the mediæ aspiratæ; for, if they had been developed from the mediæ in Sanskrit, after it had become a distinct language, we should find them represented in Gothic, for example, by *k*, *t*, and *p*, and not by *g*, *d*, and *b*; and if they had been developed from the tenuis aspiratæ, we should not find them represented in the cognate languages by the mediæ.

§. 25. Whether the Indo-European possessed the hard, as well as the soft, aspirates is still a disputed question.† The main argument brought forward in support of the opinion that it did, is the fact that the Greek aspirates, which are hard, correspond in many cases to the hard aspirates in Sanskrit. Now, in all these cases I believe that the tenuis was the original sound, and that the aspiration is generally due to the influence of neighbouring sounds, which have sometimes fallen

\* According to Lottner, who compares Gr. *δύφορ*.

† Consult Curtius, "Grundzüge," p. 375; and Grassmann in K. Z., -ol. xii., p. 109.

out. Moreover, in many of these examples we find in Greek side-forms with the simple tenuis, which evidently contain older forms of the roots. Thus, a sibilant has aspirated the tenuis in the following cases:—*sphar* (caus. to throw), *σφαῖρα*, also *σπαίρω*, *ἄσπαιρω*; *sphur* (= *sphar*), *σφῦρα*, *σφυρόν*; *sphal* (caus. with *d*, to strike), *σφάλλω*, A. S. *feallan*, Lith. *pùlti* (to fall), *sphurg'* (to thunder), *σφάραγος*, *sphant* (to split), *σφήν*; *phalaka* (a bench), *σφέλας*; *k'hid* (to cut), *σχιζω*, L. *scindo*. In *κόγχος* :: *s'añkhas* the aspiration is due to the nasal. *Khaltnas* (nom. sing.) is borrowed from *χαλινός*. The aspirate in the ending of the 2 sing. perf. *-tha* = *-θα* (*οἷσθα* = *vettha*) is due to the falling out of *v* from the pronominal stem *tva*. Grassmann compares *μάχη* with *makha* (a warrior), *ἀθήρ* with *athari* (the point of a lance), *μόθος* with *math* (to agitate), and asserts that the aspirated tenuis in all these cases is original; but *makha* comes from *magh*, *ἀθήρ* is connected with *andhas* (plant). We find the asp. tenuis developed from the asp. media in *náth* (to ask aid) from *nádth*, E. *need*, O. H. G. *nôt*; in *atha* (then) from *adha*; in *kha* (aër, cœlum), Gr. *χάος*, L. *halare*; in *phal* (to bear fruit), L. *flor*, Goth. *blōma*; in *nakha*, *ὄνυχ-*, L. *unguis*, *ungula*, Ir. *ionga*, O. H. G. *nagal*, Lith. *n'agas*. It is much more probable that the Sanskrit hard aspirates and the Greek aspirates arose either from the soft aspirates or the tenues, than that both rows of aspirates existed in the Indo-European, and afterwards coalesced in Greek.

## CHAPTER III.

## GRIMM'S LAW.\*

§. 26. THE roots of the Indo-European languages are subject to two distinct classes of changes—irregular or sporadic, and regular. The regular changes permeate all the dialects of a language, while the irregular show themselves chiefly in some one dialect. Thus, in Greek,  $\chi$ ,  $\theta$ ,  $\phi$ , in all the dialects represent the original  $gh$ ,  $dh$ ,  $bh$ ; but ἴκκος, κῶς, πόκα, ὕκα, δᾶ, ὀδεῖός, are sporadic varieties of ἴππος, πῶς, πότε, ὅτε, γῆ, ὀβελός. The regular changes are threefold :—(1), we have the splitting up of an original sound into several others, as when an I. E.  $a$  is represented in Greek and Latin by  $a$ ,  $e$ ,  $o$ ; (2), we have the loss of an original sound running through an entire language, as in the case of the disappearance of the aspirates in Latin; (3), we have the remarkable law of the dislocation of the consonants, discovered by Grimm, and called by him *Lautverschiebung*, which we now proceed to enunciate and illustrate.

§. 27. This law, stated generally, is as follows :—If the same root exist in Sanskrit, Greek, Latin, Gothic, and Old High German, when Sanskrit, Greek, and Latin present the aspirate, Gothic presents the corresponding media, and Old High German the corresponding tenuis; when the first three languages present the media, Gothic has the tenuis, and Old High German the aspirate\*; when the first three languages

\* “Deutsche Grammatik von Dr. Jakob Grimm,” vol. i., p. 584. Consult also “Gesammelte sprachwissenschaftliche Schriften” von Rudolph von Raumer, and Max Müller, vol. ii., p. 198.

present the tenuis, Gothic has the aspirate, and Old High German the media. This law may be tabularly exhibited thus :—

|      |          |    |    |    |    |    |    |    |    |    |
|------|----------|----|----|----|----|----|----|----|----|----|
| Skr. | Gr. L.   | GH | DH | BH | G  | D  | B  | K  | T  | P  |
|      | Goth.    | G  | D  | B  | K  | T  | P  | GH | DH | BH |
|      | O. H. G. | K  | T  | P  | GH | DH | BH | G  | D  | B  |

These letters, of course, are only symbols ; for in Latin we have no real aspirates, but merely the corresponding breathings, and moreover the dental breathing is wanting in Latin ; in Greek we have only the hard aspirates ; in Sanskrit H frequently takes the place of an older GH, DH, or BH ; in Gothic the guttural and labial aspirates are replaced by H and F ; and in Old High German for the expected guttural and labial mediæ we find H and F. Extending this law to Celtic, Slavic, and Lettic, we may add that these languages, though for the most part they stand on the same line as the Sanskrit, represent the soft aspirates always by the corresponding mediæ. Translating these symbols, then, into the actual consonants that represent them in each language, we have the following tables :—

## I.

|          | (1).                     | (2).            | (3).         |
|----------|--------------------------|-----------------|--------------|
| I. E.    | <i>gh,</i>               | <i>dh</i>       | <i>bh</i>    |
| Skr.     | <i>gh, h</i>             | <i>dh, h</i>    | <i>bh, h</i> |
| Z.       | <i>g, gh, g', z, zh,</i> | <i>d, dh</i>    | <i>b</i>     |
| Gr.      | <i>χ</i>                 | <i>θ</i>        | <i>φ</i>     |
| L.       | <i>h, f, g,</i>          | <i>f, d, b,</i> | <i>f, b</i>  |
| Kel      | <i>g</i>                 | <i>d</i>        | <i>b</i>     |
| Sl.      | <i>g, z, ž</i>           | <i>d</i>        | <i>b</i>     |
| Lith.    | <i>g, ž,</i>             | <i>d</i>        | <i>b</i>     |
| Goth.    | <i>g</i>                 | <i>d</i>        | <i>b</i>     |
| O. H. G. | <i>k</i>                 | <i>t</i>        | <i>h</i>     |

## II.

|          | (1).                    | (2).         | (3).         |
|----------|-------------------------|--------------|--------------|
| I. E.    | <i>g</i>                | <i>d</i>     | <i>b</i>     |
| Skr.     | <i>g, g'</i>            | <i>d</i>     | <i>b</i>     |
| Z.       | <i>g, gh, g', z, zh</i> | <i>d, dh</i> | <i>b</i>     |
| Gr.      | <i>γ</i>                | <i>δ</i>     | <i>β</i>     |
| L.       | <i>g</i>                | <i>d</i>     | <i>b</i>     |
| Kel.     | <i>g</i>                | <i>d</i>     | <i>b</i>     |
| Sl.      | <i>g, ž, z,</i>         | <i>d</i>     | <i>b</i>     |
| Lith.    | <i>g, ž</i>             | <i>d</i>     | <i>b</i>     |
| Goth.    | <i>k</i>                | <i>t</i>     | <i>p</i>     |
| O. H. G. | <i>ch</i>               | <i>z, sz</i> | <i>f, pf</i> |

## III.

|          | (1).                 | (2).         | (3).           |
|----------|----------------------|--------------|----------------|
| I. E.    | <i>k</i>             | <i>t</i>     | <i>p</i>       |
| Skr.     | <i>k, kh, k', s'</i> | <i>t, th</i> | <i>p, ph</i>   |
| Z.       | <i>k, kh, k', s'</i> | <i>t, th</i> | <i>p, f</i>    |
| Gr.      | <i>κ</i>             | <i>τ</i>     | <i>π</i>       |
| L.       | <i>c, q,</i>         | <i>t</i>     | <i>p</i>       |
| Kel.     | <i>c, ch,</i>        | <i>t, th</i> | <i>p</i>       |
| Sl.      | <i>k, c, č, s</i>    | <i>t</i>     | <i>p</i>       |
| Lith.    | <i>k, sz,</i>        | <i>t</i>     | <i>p</i>       |
| Goth.    | <i>h, g</i>          | <i>th, d</i> | <i>f, b</i>    |
| O. H. G. | <i>h, g</i>          | <i>d</i>     | <i>f, v, b</i> |

## §. 28. Examples of Grimm's Law.\*

I. (1). Skr. *dirgha* (long), Z. *darēgha* (long), Gr. δολιχός, L. *longus*, Goth. *laggs*. Skr. *laghu* (light), Gr. ἐλαχύς, I. *levis* for *legvis*, O. H. G. *liht*, Kel. *lugu* in *Lugudunum*, another form of *Lugdunum*. Skr. *gharsh* (to rub), Gr. χρίω, L. *frio*, *frico*. Skr. *ghas* (to eat), L. *hostis*, O. L. *fostis*, *hospes* (qui ci-

\* In these examples I have nearly always omitted the corresponding roots in Slavic, Lithuanian, and Celtic.

bum petit), Goth. *gasts*, E. *guest*, Lith. *gaspadi* (hospitium), and, according to Bopp, Gr. *γαστήρ*. Skr. *haryāmi* (I love), Gr. *χαίρω*, L. *gratus*, Goth. *faihu-gairns* (greedy of money), E. *yearn*, O. H. G. *kiri* (desire). Skr. *hyas* (yesterday), Gr. *χθές*, L. *heri*, *hesternus*, Goth. *gistra*, E. *yesterday*, O. H. G. *kēstar*. Skr. *hanṣa* (a goose), Gr. *χῆν*, L. *anser*, Goth. *gans*, E. *goose*, O. H. G. *kans*. Skr. *vah* (to carry), Gr. *ὑχος*, L. *veho*, Goth. *vigs* (via). O. H. G. *waggan* (currus), Gr. *χόρος*, L. *hortus*, *cohors*, E. *garden*, *gird*, O. H. G. *karto*, Goth. *gards* (a house).

I. (2). Skr. *indh* (to burn), Gr. *αῖθω*, L. *æstus*, *ædes*, A. S. *ād*, O. H. G. *eit* (fire). Skr. *rudhira* (blood), Gr. *ἐρυθρός*, L. *ruber*, *rufus*, E. *red*, O. H. G. *rôt*. Skr. *dhé* (to drink), Gr. *θῆσθαι*, *θηλή*, L. *filius*, *femina*, Goth. *daddja* (lacto), O. H. G. *tāu* (lacto). Skr. *dharsh* (to dare), Z. *daresh* (to dare), Gr. *θάρσος*, L. *fortis*, Goth. *gadaursan* (to dare), O. H. G. *gitar*. Skr. *dhû* (to shake, blow), Z. *dunman* (vapour), Gr. *θύω*, *θύελλα*, *θυμός*, L. *funus*, *suffio*, Goth. *dauns* (odor), E. *dust*, O. H. G. *tunst* (storm).

I. (3). Skr. *bhû* (to be), Z. *bû* (to be), Gr. *φύω*, L. *fui*, E. *be*, O. H. G. *pim* (I am). Skr. *bhrátar*, Z. *brátar*, Gr. *φρατρία*, L. *frater*, Goth. *bróthar*, O. H. G. *pruodar*. Z. *bar* (to bore), Gr. *φάρος*, *φάραγξ*, L. *forare*, E. *bore*, O. H. G. *poran*. Skr. *bhadra* (best), E. *better*, *best*. Skr. *bhañg'* (to break), Gr. *ρήγνυμι*, L. *frango*, Goth. *brikan*, O. H. G. *prēchan*.

II. (1). Skr. *g'un* (to beget), Z. *zan* (to beget), Gr. *γένος*, L. *genus*, Goth. *kuni* (race), E. *kind*, *child*, O. H. G. *chind* (offspring). Skr. *gar* (to sound), Z. *gar* (to sing), Gr. *γῆρυς*, L. *garrio*, *gallus*, E. *call*. Skr. *guru* (heavy), Goth. *kaurs* (heavy), E. *care*. Skr. *bhug'* (to enjoy, endure), L. *fruor*, *fun-gor*, Goth. *brúhjan*, E. *brook*. Skr. *ganḍa* and *hanu* (gena), Gr. *γένυς*, L. *gena*, Goth. *kinrus* (chin), O. H. G. *chinni*.

II. (2). Skr. *druma* (wood), Z. *dru* (wood), Gr. *δρῦς*, *δόρυ*, *δένδρον*, Goth. *triû* (tree). Skr. *dam* (to tame), Gr. *δαμάω*, L. *domare*, *dominus*, Goth. *gatamjan* (to tame), O. H. G. *zami*

(tame). Skr. *dis'* (to show), Gr. δείκνυμι, L. *dico*, Goth. *teihai* (nuntio), O. H. G. *zeigōm*. Skr. and Z. *das'an*, Gr. δέκα, L. *decem*, Goth. *taihun*, O. H. G. *zehan*. Skr. and Z. *dva*, Gr. δύο, L. *duo*, Goth. *tvai*, G. *zwei*. Skr. *vid* (to perceive), *oīda* = Goth. *vait* = Skr. *vēda*, L. *video*, O. H. G. *wizan*. Skr. *dant* (tooth), Z. *dañt*, Gr. ὀδοῦς, L. *dens*, Goth. *tunthus*, O. H. G. *zand*. Gr. ῥίζα for Ἐριδία, Lesb. βρίςδα, L. *radix*, Goth. *vaurts* (root), O. H. G. *wurza*.

. II. (3). Consult § 22.

III. (1). Skr. *s'vas'ura* (socer), Z. *qa'sura*, Gr. ἐκυρός, Gr. *socer*, Goth. *svaihra*, G. *schwager*. Skr. *dars'* (to see), Gr. δέρκω, O. S. *torht* (bright), E. *torch*, O. H. G. *zorahit*. Skr. *as'ru* (a tear), Gr. δάκρυ, O. L. *dacruma*, Goth. *togr*, O. H. G. *zahar*. Skr. *s'ālā* (house), Gr. καλία, L. *cella*, *domi-cilium*, *cellare*, E. *hall*, *hell*, *hole*. Skr. *kalya* (healthy), Gr. καλός, Goth. *hails*, E. *whole*, *heal*, G. *heil*. Skr. *s'i* (to lie), Gr. κείμαι, L. *quies*, *civis* = Osk. *kevs*, Goth. *haims* (village), E. *home*, *hamlet*. Gr. κλέπτω, L. *clepo*, Goth. *hliftus* = κλέπτῃς. Skr. *s'ru* (to hear), Gr. κλύω, κλέος = Skr. *s'rāvas*, L. *cluo*, *cliens*, Goth. *hluma* (ἀκοή), O. H. G. *hlūt* (loud), Sl. *slava* (glory). Skr. *karsh* (to draw), L. *accerso*, E. *hearse*, *harrow*. Skr. *kās* (to cough), E. *husky*, O. H. G. *huosto*.

III. (2). Skr. *tri*, Z. *thri*, Gr. τρεῖς, L. *tres*, Goth. *threis*, O. H. G. *drī*. Skr. *tarsh* (to thirst), Z. *tarshna* (thirst), Gr. τέρσομαι, L. *torreo*, *terra* (?), Goth. *thaurstei* (thirst), G. *durst*. Skr. *tar* (to cross), Z. *tarō* (across), Gr. τέρμα, L. *terminus*, *trans* = Umb. *traf*, O. N. *thrōm* (margo), E. *through*, O. H. G. *drum* (finis). Skr. *pat\** (to fly), *patra* (a wing), Gr. πέτομαι, πτερόν, L. *peto*, *penna* (O. L. *pesna*), *acci-piter*, *præpes*, O. H. G. *fedara* (a wing), E. *feather*. Skr. and Z. *tan* (to stretch), Gr. τείνω, L. *tendo*, *tenuis*, Goth. *thanja* (extendo), O. H. G. *dunni*

\* Benfey deduces Skr. *patrin* (a mountain) and Gr. πέτρος from this root, remarking that in the old poetical language clouds and rocks are identified, and the clouds considered as wings of the mountains!

(thin). Skr. *tu* (to be powerful, to increase), Z. *tu* (to be able), Gr. *τύλος, ταύς μέγας* (Hesych.), L. *tumeo, tuber, tueor, totus*, Umb. *tauta* (a city), O. Pr. *tauta* (land), Ir. *tuath* (people), Goth. *thiuda* (people), E. *thumb*, O. H. G. *dûmo* (thumb).

III. (3). Skr. *apa* (away), Z. *apa*, Gr. *ἀπὸ*, L. *ab*, Goth. *af*, O. H. G. *aba*. Skr. *saptan*, Z. *haptan*, Gr. *ἑπτὰ*, L. *septem*, Goth. *sibun*. Skr. *parā* (away), Z. *para* (from), Gr. *παρά*, L. *per*, Goth. *fra-*, E. *from*, O. H. G. *far-*, N. H. G. *ver*. Skr. and Z. *par* (to bring over), Gr. *περάω*, L. *porta*, Goth. *faran* (to go), E. *fare*, G. *erfahren*. Skr. and Z. *par* (to fill), Gr. *πίμπλημι*, L. *plenus, populus*, E. *folk, full*. Skr. *prî* (to please), Z. *frî* (to love), Gr. *πραῦς*, E. *friend*. Gr. *πύξ*, L. *pugnis*, E. *fist*. Gr. *πλινθος*, E. *flint* (?). Gr. *παῦρος*, L. *paucus*, E. *few*. Skr. *prath* (to extend), Gr. *πλατύς*, L. *Latium*, E. *flat*.

§. 29. No satisfactory explanation of the origin of the changes expressed by this law has ever been given. It has been suggested\* that "this phonetic diversity is due to a previous state of language in which the two or three principal points of consonantal contact were not yet felt as definitely separated from each other." Each of the branches of the Indo-European family, it is maintained, modified this sound in its own way; hence we have different forms of the original vague sound. But, it is extremely unlikely† that such vague sounds existed in the original Indo-European language contemporaneously with the strong articulation which is peculiar to all old languages. If we thus account for the origin of Skr. *ap* and L. *aqua*, Æol. *πίστρες*, and L. *quatuor*, &c., we will be forced from analogy to account for the origin of the Wallachian *apa, epa, patru*‡ from *aqua, equa, quatuor*, in

\* By Max Müller, vol. ii., pp. 180, 181.

† Curtius, "Grundzüge," p. 366.

‡ Max Müller suggests, as an explanation of these forms, that the Legions which colonized Dacia were raised in the Oscan and Umbrian districts of Italy, where *p* represented the Latin *qu*. But, in addition to the obvious improbability of this account, it may be added that it does not

the same way, and to assert that these Latin words were pronounced with a vague and indistinct consonantal sound; this, however, is too absurd to be maintained for a moment.

The very example (Skr. *gharma*, Gr. *θερμός*, L. *formus*) given by Max Müller should have been sufficient to demonstrate the incorrectness of this theory; for what pronounceable sound can be imagined which could approximate to each of these guttural (*g/h*), dental (*θ*), and labial (*f*) sounds, without being exactly any of them? Such divergencies arose, not from any vague articulation on the part of the Indo-Europeans, but from other causes. These were (1), the influence of neighbouring sounds; (2), the springing up of adventitious or parasitic sounds; (3), a psychological principle of differentiation, *i. e.*, a desire to keep up within the limits of the same language a difference between words or sounds that threaten to become identical, or to develop such a difference between words or sounds that are at a given moment identical. We find examples of (1) in the derivation of the Wall. *epa*, *apa* from *equa*, *aqua*; for the *u* (*v*) became *p* through the influence of the tenuis *q* (*k*). We find (2) exemplified in such forms as *χθές*, Skr. *hyas*, I. E. *ghyas*, where the *y* developed *d* before itself, as it frequently does, and then fell out, this *δ* afterwards becoming *θ* on account of the preceding *χ*.

We find numerous examples of psychological processes in all languages. Thus in Greek we have *ἀμείνων*, *μείζων*, *τείνω*, for *ἀμενῶν*, *λεγγῶν*, *τενῶ*, where the *ι* arises from the throwing back of the original *y* that once existed in the last syllable, and where this *y* must have been present to the mind before it was pronounced. This effect—called variously Hyperthesis, Infection, or Umlaut—appears in its complete form in Zend. We find it also in English, as in the verb *to fell*, the

seem to be borne out by the forms of the Wallachian language. The example (Osc. *pontis* = L. *quinque*) adduced by himself overthrows this theory; for the Wallachian for five is *quinqúe*, a word evidently of pure Latin origin.

causative of *to fall*, where the *e* (*ai*) arises from *a* by hyperthesis. In Latin forms such as *scripsi* we also see the effect of Psychological influence, for as in the hyperthesis of *i* we think of the following *y*, so we think of the following *s*, and change the *b* of *scribo* into *p*, as *s* is a hard sound. We see a similar cause at work in the origin of the It. *buono*, *nuovo*, *fuora*, *fuoco*, from L. *bonus*, *novus*, *foris*, *focus*. The Italians had lost the distinction between the short and the long *o*, but they still felt that a distinction should be made between the *o* of *nōvus* and the *o* of *nonus*; so, while they kept *o* wherever it was long, they employed *uō* to represent *o* when it was short.

In the old Norse imperfect indicative we find the *a* of the singular changed into *ö* in the plural, on account of the *u* of the final syllable, which therefore must have been present to the mind during the pronunciation of the first syllable; thus, sing. 1. *kalladha*, 2. *kalladhī*, 3. *kalladhi*; pl. 1. *kölludhum*, 2. *kölludhut*, 3. *kölludhu*.\*

§. 30. The changes of sounds, noticed in the last section, arise from what has been called by Max Müller *Dialectic Growth*; but there are other changes that manifest themselves not only in some ancient languages, but also much more frequently in their modern representatives. These latter arise from what he calls *Phonetic Decay*;† and the cause of this decay he rightly traces to laziness, or want of muscular energy on the part of the speaker. Thus, as he remarks, nearly all the changes that have taken place in the transition from Anglo-Saxon to modern English belong to this class. We have *silly* from *sælig*, *woman* from *wīfman*, *lord* from *hlāford*, *king* from *cyning*, &c. Similarly we have *squire* from Fr. *escuier*,

\* Aasen's "Norsk Grammatik," p. 224.

† Max Müller, vol. ii., pp. 176-178. Curtius calls this phenomenon *Verwitterung*, thus comparing it to the decay caused by the operation of the atmosphere.

*L. scutarius*; *stranger* from Fr. *estrangier*, *L. extraneus*; *sexton* from Fr. *sacristain*; *chapter* from Fr. *chapitre*, *L. capitulum*; *damsel* from Fr. *demoiselle*, *L. dominicella*; *Sir* from Fr. *sieur*, *L. senior*. In Greek the insertion of the mediæ between  $\mu$  and  $\rho$ , or  $\nu$  and  $\rho$ , is due to the same cause,  $\alpha\nuδρες$  and  $\gammaαμβρός$  being more easily pronounced than  $\alphaνρες$  and  $\gammaαμρος$ . We find similar insertions in English, as to *slumber* from A. S. *slumerian*, *cinders* from *L. cineres*, &c. In Goth. *hunds*, E. *hound* (*L. canis*), *d* has been added to facilitate the pronunciation. The *ds* in *gold* and *mind* have been explained in the same way, but wrongly so, for *gold* is the Gothic *gūlth* = I. E. *ghar-ta* from I. E. and Skr. *ghar* (to shine), whence Skr. *hiraṇa*, *hiraṇya* (gold), Z. *zaranu*, *zaranya* (gold), Gr.  $\chiρυσός$  =  $\chiρυτος$  = I. E. *ghar-tyas*,  $\chiλουνός$  =  $\chiρυσός$  (Hesych.), Phryg.  $\gammaλουργός$   $\chiρυσός$  (Hesych.); and *mind* = *L. ment* in *mentis*. From this root *ghar* come also Skr. *hrīku*, *hlīku* (tin), Gr.  $\chiαλκός$ , and *L. glisco*.

### §. 31. APPARENT EXCEPTIONS TO GRIMM'S LAW.\*

THE first class of these exceptions consists of natural sounds (naturlaute), onomatopœic, and imitative words; thus we have as natural sounds, Skr. *attā* (mother), Gr.  $\alphaττα$ , *L. atta*, Goth. *atta* (father); *ma* and *pa*, the words used by infants for their food and their parents, whence arise Gr.  $\μάμη$ ,  $\alpháππά$ , *L. mamma*, *mamilla*, *papilla*, G. *amme*, E. *mamma*, *papa*, *paps*, *pap*; Skr. *tāta* (dear, used chiefly by parents addressing their children, and children their parents), Gr.  $\tauέττα$ ,  $\tauάτα$ ,  $\tauίθη$ ,  $\tauιθήνη$ , *L. tata*, E. *tit*, *teat*, O. H. G. *tutto* (breast), *toio* (godfather), Lith. *tetu* (aunt): as onomatopœic and imitative words, we have Skr. *hrēsh* (to neigh), O. H. G. *hross*, E. *horse*; Skr. *hikkā*, E. *hiccough*; Gr.  $\iotaλακτώ$ , E. *howl*, G. *heulen*; Gr.  $\kappaλαγγή$ , *L. clango*, E. *clank*, *clatter*, *clap*,

\* For the materials of sections 31 and 32 I am almost entirely indebted to the instructive articles of Lottner and Grassmann, in K. Z., vol. xi., p. 161; and vol. xii., p. 131.

O. N. *kluka* ; L. *grunnio*, E. *grunt* ; Gr. *μυκάσθαι*, *μηκάσθαι*, G. *meckern* ; Gr. *λάπτω*, L. *lambo*, *labrum*, E. *lap*, *lip*.

A second class consists of borrowed words. L. *tus* is borrowed from Gr. *θύος* ; if it were genuine Latin, it would begin with *f*, as the root is Skr. *dhû*. L. *scalpo* and *sculpo*, along with the art of sculpture, were borrowed from the Greeks ; for these words correspond to Gr. *γλάφω* and *γλύφω*, the *p* representing the hard *φ* ; the words *glaber* and *glubo* are genuine Latin words, *b* being the exact equivalent of the Gr. *φ*. *Scribo* also exactly corresponds to *γράφω*, with the exception of the prefixed *s*, which proves either that writing was known to the Greeks and Italians while they still formed one people, or that *scribo* was borrowed from the Greeks in very early times, when *φ* was still soft. When a word belonging to any one of the three classes of languages, whose consonants are regulated according to Grimm's law, is similar in meaning and consonants to a word belonging to either of the other classes, we may lay down, as a general rule, either that one of these words was borrowed from the other, or else that there is no connexion between them. E. *husky* has nothing to do with Z. *huska* (dry) ; for *husky* is connected with Skr. *kâs* (to cough), and *huska* = Skr. *s'ushka* (dry, emaciated), Gr. *στυγός* (dry), L. *siccus*. E. *go* is not from same root as Skr. *gâ*, but we find it in Skr. *hâ* (to go), I. E. *ghâ*. E. *look* is not the Skr. *lok* (to see), but rather *laksh* (to see) = *lag* + *s*. E. *whole* is not the same as Gr. *ὅλος* ; for E. *h* represents an I. E. *k*, while the Greek aspirate represents an I. E. *s*. E. *call* is not connected with Gr. *καλεῖν*, nor E. *care* with L. *cura* ; for E. *c* requires *g* in the corresponding Greek and Latin roots ; E. *call* corresponds to Skr. *gar* (to praise), *gir* (a voice), Gr. *γῆρυς*, L. *garrio*, *gallus*, and E. *care* to Skr. *guru* (heavy), L. *gravis*.

A third class of exceptions arises from sounds having been irregularly changed within the same language : thus *h* in E. *heart* appears to represent *h* in Skr. *hrd*, but here the Skr. *h* has been developed from an I. E. *k*, as we see from the cog-

nate forms, Gr. καρδία, L. *cor*, Ir. *críde*. The following cases are easily explained by supposing that the corresponding Indo-European roots began and ended with aspirates. Thus we have, I. E. *bhūdha*, Skr. *budha* (depth), Gr. πυθμήν, L. *fundus*, O. H. G. *bodam*, E. *bottom*; I. E. *bhūdh*, Skr. *budh* (to know), Gr. συνθάνομαι, Goth. *biuda* (I know); I. E. *bhandh*, Skr. *bandh* (to bind), Gr. πενθερός, πείσμαι, L. *fascis*, *funis*, E. *bind*; I. E. *bhūdh*, Gr. πείθω, L. *jido*, Goth. *bāja*; I. E. *bhūdh*, Skr. *bādih* (to repel), Gr. πάσχω (for παθ-σκω), L. *ferdo*, O. N. *bōd* (a fight), A. S. *beadu*; I. E. *bhāghu*, Skr. *bāhu* (arm), Gr. πῆχυς, O. N. *bogr*, O. H. G. *buoc*; I. E. *bhagh*, Skr. *bahu* (large), Gr. παχύς; I. E. *bhugh*, Skr. *bañh* (to grow), Goth. *bagms* (tree), E. *beam*; I. E. *bhugh*, Skr. *bhug'* (to bend), Gr. φεύγω, L. *fugio*, Goth. *biuga* (I bend); I. E. *bhargh*, Gr. φράσσω (for φραγγω), Goth. *hairga* (I guard), *baurgs* (a town); I. E. *bhargh*, L. *flagellum*, Goth. *bliggvan* (to scourge); I. E. *dhūbh*, Skr. *dhūp* (to fumigate), Gr. τῦφος (smoke), τυφλός, Goth. *daubs* (deaf), *dumbs* (dumb), G. *taub*; I. E. *dhigh*, Skr. *dih* (to smear), Gr. θιγγάνω, L. *jingo*, Goth. *deiga* (I form), *daijs* (dough), G. *teig*; I. E. *dhaigh*, Skr. *dak* (to burn), Goth. *dags* (day), O. H. G. *tāht*, (a lamp-wick), G. *tag*, *docht*; I. E. *dhughatar*, Skr. *duhitar*, Goth. *duuh-tar*, O. H. G. *tohtar*: this word comes perhaps from the next root, and means the "milkmaid;" I. E. *dhugh*, Skr. *duh* (to milk, to enjoy), Goth. *dugan* (to be useful), E. *dug*, Ir. *diu-gaim* (I drink off), Scot. *deoghail* (mammæ sugere); I. E. *dhrugh*, Skr. *druk* (to hurt), Gr. θέλω (?) L. *frustra*, Goth. *driugan*, O. N. *draugr* (a ghost), Z. *drug'* (an evil spirit), O. H. G. *triugan* (to deceive), Ir. *droch* (bad); I. E. *ghābh*, Skr. *g'abh*, (to gape), E. *gape*; I. E. *ghardh*, Skr. *gardh* (to desire), Goth. *grēdugs* (hungry), E. *greedy*, O. H. G. *hir* (desire), G. *gier*, Ir. *gradh* (love). *D* in Skr. *dvāra* (a door), represents an I. E. *dh*; for we have Gr. θύρα, L. *fores*, Goth. *daur*, O. H. G. *tor*., Ir. *dor* (a door). Gr. γει (Skr. *ha*, Ved. *gha*), may have arisen on European soil from an okler χε,

from same root as  $\chi$  in  $\tilde{\eta}\chi$ , Skr. *hi*. Bopp, however, connects with  $\gamma$  the *k* in Goth. *mik*, *thuk*, and the *h* in O. H. G. *unsih*, *iwi*, which can only be explained on the supposition of an original *g*. In Skr. *aham*, Gr.  $\epsilon\gamma\acute{\omega}$ , L. *ego*, Goth. *ik*, Skr. *mahat*, Gr.  $\mu\epsilon\gamma\alpha\varsigma$ , L. *magnus*, Goth. *mikils* =  $\mu\epsilon\gamma\acute{\alpha}\lambda\omicron\varsigma$ , Skr. *hanu* (jaw), Gr.  $\gamma\acute{\epsilon}\nu\omicron\varsigma$ , L. *gena*, Goth. *kinus*, Skr. *lañgh* (to jump), Gr.  $\lambda\alpha\gamma\acute{\omega}\varsigma$ , Goth. *laikan*, the Gothic and Greek forms point back to an I. E. *ǵ*, while the Skr. *h* represents an I. E. *gh*. Hence we may infer either that the Indo-European possessed these roots in a double form before the separation of the Sanskrit from the other languages, or that the Sanskrit subsequently aspirated the original *g*, and then reduced it to *h*.

\* §. 32. ACTUAL EXCEPTIONS TO GRIMM'S LAW.

These exceptions occur in the consonantal groups *sk*, *st*, *sp*. Thus we have Skr. *k'had* (to conceal), from I. E. *skad*, Gr.  $\sigma\kappa\acute{o}\tau\omicron\varsigma$ , Goth. *skadus* (shadow), Ir. *scath* (shade); L. *piscis*, Goth. *fisks*; Skr. *k'hid* (to cut), from I. E. *skid*, Gr.  $\sigma\chi\acute{\iota}\zeta\omega$ , L. *scindo*, Goth. *shaida* (separo), Ir. *scaithim* (I cut off); L. *hostis*, Goth. *gasts*; Skr. *tāra* (star), Gr.  $\alpha\sigma\tau\acute{\eta}\rho$ , L. *stella*, Goth. *stairnô*; Skr. *tud* (to strike), from I. E. *stud* (?), Gr.  $\tau\upsilon\delta\epsilon\acute{\upsilon}\varsigma$  (the striker—compare Charles Martel and Judas Maccabæus), L. *tundo*, *tudes* (hammer); Goth. *stauta* (I strike); Gr.  $\sigma\tau\acute{\epsilon}\iota\chi\omega$ , Goth. *steiga* (I ascend); Gr.  $\pi\tau\acute{\upsilon}\omega$ , L. *spuo*, *pituita*, Goth. *speiva* (spuo).

An original *tenuis* sometimes appears as a *media*. Thus we have Gr.  $\delta\acute{\alpha}\kappa\upsilon\tau\iota$ , Goth. *tagr*; L. *septem*, Goth. *sibun*; L. *quatuor*, Goth. *fidvôr*; Gr.  $\kappa\alpha\tau\acute{\upsilon}\varsigma$ , Goth. *hardus*; L. *centum*, Goth. *hund*; L. *pater*, Goth. *fadar*; L. *mater*, A. S. *mōdor* (Goth. *bróthar* and E. *father*, &c. are regular); Gr.  $\kappa\acute{\upsilon}\tau\omicron\varsigma$ , A. S. *hýd* (hide).

In the present participle we have Goth. *-and* for Skr. *-ant*, Gr. *-οντ*, as Goth. *bairands* (nom. sing. masc.) = Gr.  $\phi\acute{\epsilon}\rho\omega\iota\iota$ , E. *friend*, *fiend*. In the past participle we have Goth. *-d* for

Skr. *-ta*. This Goth. *d* must have arisen from an older *th*, of which traces are still found, as in *fads* and *faths* = Skr. *patis*, *kunths* (known) = Skr. *g'ñūtas* = Gr. *γνωτός* (whence E. *uncouth*), *bairith* and *bairid* = Skr. *bharati*.

We find the mediæ unchanged in the following cases:—Skr. *gar* (sonare), E. *nightin-gale*; Skr. *g'arbh* (aperire), Gr. *γράφω*, Goth. *graba* (fodio), E. *grave*, *grub*, Ir. *grabhaim* (I carve), *grafaím* (I write), *grafan* (a grubbing axe); Skr. *gras* (vorare), L. *gramen*, E. *grass* (unless *grass* be from I. E. and Skr. *ghar* (to shine) whence *harit* (green) Gr. *χλόη*, L. *hó'us*, E. *green*); Skr. *hlūd* (to be glad), Gr. *κέχλαδα*, E. *glad*. In many of the cases where a media is retained, this effect is due to the influence of a neighbouring *l*, *m*, *n*, or *r*.

The original tenuis is also unchanged in the following cases: Gr. *τεταγών*, L. *tango*, Goth. *tékan* (to touch), E. *take*; Skr. *pathas* = Gr. *πάτος*, A. S. *pād*, E. *path*.

In the three following cases a Gothic *tenuis* corresponds to an I. E. aspirate: I. E. *magh*, Skr. *mah* (to be great), *mámahyê* (macto), *makha* (a warrior), Gr. *μάχομαι*, L. *macto*, *macellum*, Goth. *meki* (a sword); I. E. *ghrabh*, Skr. *grah*, Ved. *grabh* (to seize), Gr. *γρῖφος*, Goth. *greipan* (to seize), E. *grip*, *grab*, Ir. *grabaim* (I devour): Gr. *σκάφος*, *σκάπτω* for *σκαφτω*, Goth. *skip* (ship).

## CHAPTER IV.

## THE SANSKRIT ALPHABET.\*

## §. 33. TABULAR VIEW OF THE SOUNDS.

| MUTES.                       |           |                           |            | SEMIVOWELS.                    |          |                |                         | VOWELS.                             |
|------------------------------|-----------|---------------------------|------------|--------------------------------|----------|----------------|-------------------------|-------------------------------------|
| <i>unaspl.</i><br>surd. son. |           | <i>asp.</i><br>surd. son. |            | <i>Spirants.</i><br>surd. son. |          | <i>Nasals.</i> | <i>r &amp; l-sounds</i> |                                     |
| Gutt. <i>k</i>               | <i>g</i>  | <i>kh</i>                 | <i>gh</i>  | <i>h</i>                       | <i>h</i> | <i>ñ</i>       |                         | <i>a, ā</i>                         |
| Pal. <i>k'</i>               | <i>g'</i> | <i>k'h</i>                | <i>g'h</i> | <i>s'</i>                      | <i>y</i> | <i>ñ</i>       |                         | <i>i, ī</i> } <i>é, āi</i>          |
| Cer. <i>t</i>                | <i>d</i>  | <i>th</i>                 | <i>dh</i>  | <i>sh</i>                      |          | <i>ṇ</i>       | ( <i>r, l</i> ) ?       | ( <i>r, ṛ, l</i> ) ? } <i>ó, āu</i> |
| Dent. <i>t</i>               | <i>d</i>  | <i>th</i>                 | <i>dh</i>  | <i>s</i>                       |          | <i>n</i>       | <i>r, l</i>             | <i>r, ṛ, l</i> }                    |
| Lab. <i>p</i>                | <i>b</i>  | <i>ph</i>                 | <i>bh</i>  |                                | <i>v</i> | <i>m</i>       |                         | <i>u, ū</i>                         |

Sanskrit writing is called by the native grammarians *Dē-ranāgarī*, which means the *nāgarī* of the gods or brahmans. *Nāgarī* is the name applied to the current style of writing used by the Hindus, and is supposed to be derived from *na-gara* (a city), thus meaning “the art of writing as practised in cities” (M. Müller’s “Skr. Gr.” p. 1). The names of the letters are formed by adding *kāra* (making) to each sound; thus *a* is called *akāra*, *k*, *kakāra*, as each consonant is supposed to have a short *a* inherent in it. *R* forms an exception, and is called *rēpha* (burring), from *rēbh* (to sound), Gr. *ροῖβδος*.

\* *Sanskṛta* means properly “what is made fit;” hence it came to mean purified, as being made fit for sacred purposes. This is why this name is applied to the ancient sacred language of the Vedas. The local dialects of India are called *Prākṛta*, i. e. “what has a type, or original” (Benfey’s “Skr. Lex.”), this type (*prākṛti*) being Sanskrit. *Sanskṛta* is from *sam* (σύν) and *skar* (to cut), according to Lottner, who thinks that in this compound *skar* is mixed up with *kar* (to make).

## §. 34. ANUSVÂRA, ANUNÂSIKA AND VISARGA.

Anusvâra, *ṇ* (from *anu*, after, and *svâra*, sound), is a nasal after-sound, and is compared by Bopp to the Fr. *n* at the end of a syllable. It is, however, properly speaking, not an after-sound, but merely a modification of the preceding vowel (§. 10). Its pronunciation is very weak, for it does not prevent the euphonic influence of an *i* or *u* upon a following *s*; in prosody, however, it and Visarga make a preceding short vowel long, when the next syllable begins with a consonant. It occurs in the middle of words before the sibilants and *h*, as *dans'* (to bite), *hânsa* (goose), *sinha* (lion). Before *y*, *r*, and *v*, in the middle of words it is only found in reduplicated syllables, as *yanyamyatē*. Another anusvâra is used for the nasals, merely "for the sake of neatness in writing," as Colbrook says. This must always receive the same pronunciation as the nasal in the place of which it stands. In P'râkrit a final *m* always, and, as is never the case in Sanskrit, the dental *n* become the anusvâra (Bopp's "Skr. Gr.," p. 17).

Anunâsika (from *anu*, after, and *nâsikâ*, the nose), is a still weaker nasal sound than Anusvâra; its weakness is shown from the fact that it can be followed by *l* and *r*. It is very nearly equivalent to the Fr. *n* in *genre*. Such a combination is generally avoided in French by inserting *d*, as in *viendrai*: compare *ἀνδρός* for *ἀνρος*.

Visarga, *h*, is an euphonic change of final *s* and *r*. It may also take the place of *s* before the loc. pl. ending *su*. The Visarga that occurs before *k* and *kh* is formed by the root of the tongue and is called *G'ihvâmûliya*; that occurring before *p*, *ph*, and a pause, by the palate, and is called *Upadhmanîya*; *s* therefore before labials, is equivalent to the blowing sound *f*. We see the same change in other languages: thus the Irish *s* sometimes corresponds to the Welsh *f*; we have in Greek the two forms *φῆρ* and *θήρ*, and L. *rufus*, beside *ἑρυθρός*. We may explain on this ground the change of final *as* into *ô* in Sanskrit, through the steps *as*, *af*, *av*, *au*, *ô*.

## §. 35. THE VOWELS.

Sanskrit had no short *e* or *o*, though the short *a* had both a clear and an obscure sound (*Pân.* VIII. 4, 68). Short *e* and *o* are similarly wanting in Gothic. Skr. *ā* is represented in Greek by *ᾱ*, *ε*, *ο*; and Skr. *â* by *ᾱ*, *η*, *ω*; in some cases Skr. *â* corresponds to Gr. *ᾱ*, *ε*, *ο*, as in *âgas* = *ἄγος*, *vâstu* = *ῥᾱστυ*, the participial suffix *-mânas* = *-μενος* (L. *-minus*) and *-μνος* (L. *-mnus*) in *μέδιμνος*, *μέριμνα* (L. *alumnus*, *columna*), *dhâman* = *θέμα*, *dâru* = *δύρον*, *gânu* = *γόνυ* (L. *genu*), *g'agâna* = *γέγονα*, *bhâras* = *φόρος*, *dâtâ* = *δοτήρ*, *a* in *ἔχομεν*, &c. = *â* in *rahâmas*, &c. In Bengali *ā* has either become *o*, or been lost, as in B. *opotyo* = Skr. *apatya*; B. *ontor* = Skr. *antara*. *Ṛ* is pronounced as *ri* in *merrily*. It is never original, but has always been developed from *r*, preceded or followed by any vowel; thus we have *tr̥tīya* (*tertius*) from *tri*, *str̥nômi* = *στέρνυμι*, *s'r̥inômi* (I hear) from *s'ru*, *bhr̥kūtī* (a frown) from *bhr̥û* (an eyebrow), *pr̥k'h* from *prak'h* (to ask), *pit̥r* from *pitar*, *dât̥r* from *dâtâr*, *pitar* and *dâtâr* being the original forms, as the accusatives *pitarām* = *πατέρα*, and *dâtârām* = *δοτήρα* prove. The vowel *ṛ̥* is pronounced exactly as *ri*; it only occurs in nouns whose stems end in *r̥*, and which lengthen this vowel after the analogy of other nouns, whose stems end in other vowels; thus, *pit̥r̥n* = *πατέρας*, *duhit̥r̥s* = *θυγατέρας*, *dat̥r̥nām* = *datorum*. The vowel *ḷ* is pronounced as *li*. It has been developed from an older *r̥*, and occurs only in the root *klp* (to create), which is derived from *kr̥* and the causal *p*, which is connected, perhaps, with the root of *ποιέω*. Bopp connects E. *help*, and Benfey L. *corpus*, with this root. The long *ḷ* vowel never occurs, and is merely an invention of the grammarians.

## §. 36. WEIGHT OF THE VOWELS.

*A* is heavier than *u*, and *u* heavier than *i*; that is, *a* occurs in the lightest forms, *i* in the heaviest, and *u* in the interme-

diate. For instance, the terminations *-vas*, *-thas*, *-tas* are heavier than *-mi*, *-si*, *-ti*; hence we have *yunâmi* (I bind), *yunâsi*, *yunâti*, but *yunîvas* (we two bind), *yunîthas*, *yunîtas*; similarly we have *a* weakened to *u* in *kurmas* (we make), beside *karômi* (I make), and in *-thus*, *-tus*, the terminations of the 2nd and 3rd dual of the reduplicated perfect, beside *-thas* and *-tas* of the present. As *e* is equal to *ai*, it is lighter than *a*, and heavier than *i*; hence we have *é'mi* = *εἴμι*, and *imás* = *ἴμεν*; similarly we have in Latin, *amicus*, *inimicus*; *cano*, *cecini*; *jacio*, *abjicio*; *tango*, *tetigi*; *lejo*, *colligo*. In open syllables *a* becomes *i*, while in closed ones it either becomes *e* or remains *a*, as in *abjectus*, *inermis*, *expers*, *tubicen* beside *tubicinis*, and *contactus*, *eratus*. As *u* is lighter than *a*, and heavier than *i*, we have *calco*, *conculco*; *salsus*, *insulsus*; *fructifer* beside an older *fructufer*. As labials prefer *u*, we find *occupo*, *aucupo*, *nuncupo*, *contubernium*, &c. The vowel *u* in Latin frequently maintains its ground, and does not give way, as in *tutudi*, *pupugi*. As *ae* is heavier than *i* (= *ii*), and *au* than *û* (= *uu*) and *ô*, we have *quæro*, *acqui-ro*; *claudio*, *concludo*; *faux*, *suffoco*. Short *o* in Latin is lighter than *u*, as we see from *corpus*, *corporis*; *jecur*, *jecoris*. The oldest forms of words are therefore generally distinguished by the retention of the vowel *a*; for example, Skr. *k'atvâras* and L. *quatuor* are older than Gr. *τέσσαρες*, *πίσυρες*, and Goth. *fidvôr*; Skr. *dadâmi* than *δίδωμι*; Skr. *dadhâmi* than *τίθημι*; Skr. *naktam* (by night) than *νύκτα*. Within the limits of the Sanskrit itself *a* is frequently reduced to *i* and *î*, *u* and *û*; thus *giri* (mons) and *guru* (heavy) from *gar*; *sthitas* = L. *status*, Gr. *στατός*; *sthitis* = Gr. *στάσις*; *hiraṇa* (gold), Z. *zaranâ*; *pitâ* = Gr. *πατήρ*; *puras* = Gr. *πάρος*; *stîrna* from *star* (sternere); *pîta* (part., præter. pars.) from *pâ* (to drink); *dirghas* = Z. *dareghas* = Gr. *δολιχός*; *pûrṇas* = L. *plenus*, from *par* (to fill). *A* often vanishes completely, as in *santi* = L. *sunt*, from *as* (to be); *g'agmus* (3 pl. perf.) from *gam* (to go). After *v* and *y* this frequently occurs, and then these spirants are vocalized into

*u* and *i*, respectively, as *ukta* (part. præt. pass.) from *vak'* (to speak) and *ishta* (part. præt. pass.) from *yag'* (to sacrifice).

### §. 37. GUNA AND VRDDHI.

*Guna* (quality) consists in prefixing a short *a* to any vowel, and *Vrddhi* (increase) in prefixing a long *â*. We have therefore,

|                   |          |          |           |           |           |           |           |           |           |           |           |           |           |
|-------------------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Primitive Vowels, | <i>a</i> | <i>â</i> | <i>i</i>  | <i>î</i>  | <i>u</i>  | <i>û</i>  | <i>ê</i>  | <i>âi</i> | <i>ô</i>  | <i>âu</i> | <i>ê</i>  | <i>r</i>  | <i>l</i>  |
| Guna,             | <i>â</i> | ..       | <i>ê</i>  | <i>ê</i>  | <i>ô</i>  | <i>ô</i>  | ..        | ..        | ..        | ..        | <i>ar</i> | <i>ar</i> | <i>al</i> |
| Vrddhi,           | <i>â</i> | ..       | <i>âi</i> | <i>âi</i> | <i>âu</i> | <i>âu</i> | <i>âi</i> | ..        | <i>âu</i> | ..        | <i>âr</i> | <i>âr</i> | <i>âl</i> |

It is only from a comparison of grammatical forms that we can distinguish the *guna* of *a* from its *vrddhi*; e. g. by comparing *papâta* (he fell) from *pat* with *virês'a* (he entered) from *vis'*, we see that *â* in the former is the *guna* of *a*, as *ê* in the latter is the *guna* of *i*.

The *guna* of *i* is *ê*, as in *êmi* = *εἶμι*; *vêda* = *οἶδα*; *vêsas* = *φοῖκος*; *s'êlê* = *κεῖται* from *s'i*, whence L. *civis*. The *vrddhi* of *i* is *âi*, as in *vâis'ya* (a man of the third class), from *vis'* (to enter); *s'âiva* (a worshipper of Siva) from *s'iva*, &c.

The *guna* of *u* is *ô*, as in *bubôdha* (he knew) from *budh*; *sûnôs* (gen. sing.) of *sûnu* (a son), &c. The *vrddhi* of *u* is *âu*, as in *bâuddha* (a follower of the Bauddha religion) from *budh*; *Bâudha*, a son of *Budha*, &c.

These examples are sufficient to show what we mean, when we speak of the *guna* or *vrddhi* of any vowel.

### §. 38. THE GUTTURALS.

Skr. *k* is = I. E. *k*: *kas* = L. *quis* = Goth. *hvas*, Gr. *κῶς*, *κότρον*, Ir. *cia*; *kâla* (time), Gr. *καρὸς*, Goth. *hveila*; *kâla* (death), Gr. *κήρ*, Ir. *ceal*; *kârâ* (a prison), L. *carcer*; *kan* (to shine), L. *candela*, Goth. *skeina* (I shine), Ir. *cann* (the

full moon). Bopp, Schleicher, and others have asserted that *p* frequently represents an I. E. *k*, and that consequently we find these sounds interchanged in Sanskrit and the cognate languages : thus we have, Skr. *kanth* (to mourn), Gr. *πένθος*, *πέπονθα* ; Skr. *kars'* (attenuare), L. *pareo*, *parvus*, *parrus* ; Skr. *ka* (who), Gr. *πό-τ'ερων* ; Skr. *pāpa* (bad), Gr. *κακός*, L. *pejor* for *pepior* ; Skr. *pañk'an* = L. *quinque* ; Skr. *pak'* (to cook), Gr. *πέπω*, L. *coquo*. Now, I am fully convinced that *p* has never been thus developed from an original *k* ; but that, wherever these sounds appear to be interchanged, either the original sound was *ke*, or else the change is due to assimilation, and perhaps in one or two cases to a false analogy. Thus Skr. *ka* must be derived from an I. E. *kea* ; for we find Skr. *kva* (where), *kutra* (where), L. *quis* and Goth. *hras*, all of which point back to an I. E. *kea* ; Skr. *kātrāras*, Gr. *πίστ'ρ'ες*, Lith. *keturi*, point back to an I. E. *kratrāras*, which we find in L. *quatuor* ; Skr. *pañk'an*, may have been a reduplication of *kvan*, as L. *quinque*. In some cases an initial *p* may have been changed into *k* or *ke* by the assimilative power of a succeeding *k* or *ke*, as some assert to have been the case with L. *coquo* and *quinque* : from a comparison, however, of *coquo* with Lith. *kepejus* (a baker), and Gr. *ἄρτοκόπος* (a baker), it seems possible that the initial *k* or *ke* may be original : compare L. *coquina* = *popina*, *culina* for *cuclina*.\*

*Ksh* (= *ks*) corresponds frequently to *κτ* in Greek ; here either *kt* was original, and from it *ks* arose by weakening the explosive sound to a sibilant, or else *ks* was original, and *s* became *t* through the assimilating power of the preceding explosive sound. We have *ṛkshas* = *ἄρκτος* ; *takshā* = *τέκτων* ; *kshan* (to hurt), *κτείνω*, *κτά-μεναι* ; *kshi* (to rule), *κτάομαι* ; *kshi*

From the fact that this same root, meaning to *bake*, is found in Skr., Gr., and L., Mommsen appears to be mistaken in asserting that the Greeks and Latins did not practise baking till after they separated from the parent stock and from each other.

(to dwell), κτίζω; *akshu* (the eye), ὀκταλλος. Sometimes also *ksh* corresponds in Greek to ξ, and sometimes to σχ, as *kshura* (a razor), ξυρόν; *kshud* (conterere), ξύω, ξυστός, for ξυέτος; *kshad* (to slaughter), σχάζω; similarly we have *kshal* (to wash) beside Lith. *skalan* (I wash), and *kshubh* (to agitate) beside A. S. *be-scufan* (contrudere), G. *schieben*. *Sh* sometimes disappears, and leaves *k* or *kh*, as in *kshud* (conterere), L. *cudo*, *incus*; *ksham* (to endure), κομίζω; *kshudra* (small), Lith. *kudikis* (infans), Pers. *kúdek* (small); *khura* (a razor), another form of *kshura*; *kshêtra* (campus), Goth. *haiþli* (ager), G. *heide*; *kshaya* (a house), Ir. *caí* (a house). *K* also sometimes disappears, and leaves *s*, as in *kshubh* (to agitate), W. *hwbiau* (to make a sudden push), Sl. *sûbati* (to agitate); and perhaps in *kshvêl* (se movere), O. H. G. *suillu* (turgeo). *Ksh*, when not initial, appears often as *g* in Gothic and English: we have *kānksh* (optare), E. *hunger*; *pakshin* (a bird), Goth. *fugls*, E. *fowl*, *akshu* (the eye), Goth. *augó*, E. *eye*. *Ksh*, according to Bopp, also appears as *kr* in Latin and Greek: we have *kshapas* (night), L. *crepus-culum*; *kshi* (to rule), *urukshayas* = ἐρρυκρείων; *kship* (to throw), ῥίπτω for κριπτω; *kshipra* (celer), κραιπνός.

*Kh* has generally been developed from an older *k*, sometimes through the aspirating influence of a preceding *s*, which has afterwards disappeared: thus we have *khañg'* (to limp), Gr. σκάζω, O.H.G. *hinkan*; L. *caligo*; *khan* (to dig), Gr. χάνω, L. *canalis*, *cuniculus*, O.H.G. *ginēm* (hio); *khad* (to slay), L. *clades*, with *l* inserted, as in Goth. *hlaha* (I laugh), G. *lachen*, E. *laugh*, beside Skr. *khakkh* (to laugh),\* *khâd* (to eat), Ir. *caithim* (I eat). *Kh* also represents an I. E. *gh* in *kha* (air), Gr. χάος, L. *halare*, and *nakha* (a nail), Gr. ὄνυξ, Goth. *nagls*.

*G* = I. E. *g*: *gar* (to sound), Gr. γηρύω, γλώσσα, L. *gallus*, *garrire*. Wherever Skr. *g* corresponds to *b* in Greek or

\* *L* is perhaps inserted in L. *claudus*, Skr. *khôd* (to be lame); Ir. *glun*, Skr. *g'ānu*; Ir. *dluimh* (smoke), Skr. *dhūma*.

Latin, the original sound must have been *gv*: thus we have I. E. *gvanú*, Skr. *g'anî* (a woman), Gr. γυνή for γFava, Bœot. βανά, Ir. *bean* (a woman), E. *quean*, *queen*; I. E. *gvam*, Skr. *gam* (to go), Goth. *gima* (I come), L. *venio* for *gvenio*; I. E. *gvar*, Skr. *gar* (to devour), Gr. βρώσκω, L. *gula*, *gurgles*, *glutio*, *voro* for *gvoro*; I. E. *gvau*, Skr. *guru* (heavy); Gr. βαρύς, L. *gravis*; I. E. *gvâ*, Skr. *gô* (a cow), Gr. βοῦς, γά in γα-λα (for γα-λακτ, \* which, according to Bopp, meant *lac vaccinum*, λακτ being the same word as Skr. *dugdha*, milk), L. *bos*, *ceva*; I. E. *gvâ*, Skr. *gô* (the earth), Gr. γῶα for γFaa. γαῖα for γaFia, γῆ for γaa.

*Gh* = I. E. *gh*: *stigh* (to mount up), Gr. στείχω, A. S. *staeger* (a stair); Skr. *gharma* (warm), Sl. *gorëti* (ardere).

*H* is a sonant, and therefore cannot have the hard sound generally given to it by English grammarians, perhaps on account of its having a hard sound in Bengali. It never ends a word, and in any other position only stands before vowels, and semivowels, as in *hrêsh* (to neigh), *hnu* (to hide), *hlûd* (to be glad). When it comes before *t* or *th*, it changes them into *dh* or *dh*, as in *dugdha* from *duh* (to milk), L. *duco*, and *lidha* from *lih* (to lick), Gr. λείχω. *H* represents an I. E. *gh* in *hima* (snow), Gr. χιών; *hari* (green), Gr. χλόη, *hyas*, Gr. χθές; an I. E. *dh* in *hitas* = θετός; an I. E. *bh* in *grah*, Ved. *grabh* and *mahyam* (mihi), beside *tubhyam* (tibi); and an I. E. *k* in the single case of *hrd* (the heart).

### §. 39. THE PALATALS.

The palatal mutes and nasals have all arisen from the corresponding gutturals; and the palatal sibilant generally stands for an original *k*. It is not known how these letters were

\* Max Müller assents to the first part of this derivation, and compares with it Gr. βούρυπον, and Ir. *bleachd* (milk) for *bo-leachd*, but he connects λακτ with Skr. *rag'as* (a clear fluid). The Homeric γλάρος would then be exactly equivalent to a Skr. *gorag'as*.

pronounced in ancient Sanskrit; *k'* may have been sounded either as *ty* or as *ky*, like the *c* in E. *card*, which is frequently pronounced as if it were written *cyard*.

*K'* = I. E. *k*, *ká* = L. *que*, *pe*, in *quippe*, Goth. *uh*, *h* in *hvasuh* (quisque), *nih* (neque); *k'akshus* (the eye), Ir. *cais* (the eye); *k'añk'* (vacillare), L. *cunctari*, Ir. *ceangtha* (they go); *k'áurya* (furtum), Ir. *coire* (trespass); *k'and* (to shine), L. *candeo*, *æccendo*, *scintilla*, Goth. *skeina* (I shine); *k'al* (to move), Gr. *κέλωμαι*, *κέλης*, L. *celer*, *procella*, Ir. *caill* (a path); *k'al* (nugari), Ir. *cal* (a joke); *k'arman'* (corium), Gr. *χόριον*, L. *corium*, *calceus* (?) Ir. *croicionn* (a skin). In reduplicated syllables *k'* takes the place of *k*, as in *k'akâra* (feci), from *kr*.

*K'h* = I. E. *sk*, *k'hid* (to cut), Gr. *σκίδνημι*; L. *scindo*, Goth. *skaida* (I separate), Ir. *scaithim* (I cut off); *gak'k'hâmi* (I go) for *ga-skâmi*; *prak'h* (to ask) from L. *precor*, I. E. *prask*.

*G'* = I. E. *g*; *g'ânu* = Gr. *γόνυ*; *g'val* (to burn), Ir. *geal* (bright), *gual* (coal), E. *coal*; *g'var* (to be sick), L. *æ-ger*, Ir. *gurt* (pain); *g'uâ* (to know), Gr. *ἔγνων* (*γ*)*νοῦς*, L. (*g*) *nosco*, *gnarus*, *i-gnoro*, E. *know*, *can*, Ir. *gnia* (knowledge); *g'ush* (to desire), L. *gustus*, Goth. *kîusu*, E. *choose*, Ir. *gus* (desire); *g'ash* (to kill), Ir. *gus* (death), and perhaps L. *vasto* for *gvasto*, as *vivo* for *gvivo*; &c.; *g'an* (to produce), Gr. *γίγνομαι*, L. *gigno*, *genus*, E. *kin*, Ir. *genim* (I beget); *g'anaka* (father), from last root, Gr. *könig*, E. *king*. In reduplicated syllables *g'* takes the place of *g*, as in *g'igâmi* = Gr. *βίβημι*.

*S'* nearly always represents an I. E. *k*, and consequently we find corresponding to it *k* in Greek and Latin, and *h* in Gothic. The Lettic and Slavic languages, on the other hand, nearly always present the sibilant, although the guttural is sometimes found, as in Lith. *akmen*, Sl. *kamen*, Skr. *as'man*. We have *nas'* (to perish), Gr. *νέκυς*, L. *nex*, *nox* (the dying away of day); *S'rî* (the deity of plenty), L. *Ceres*; *s'ravas*

\* See Ellis' "Phonetics," p. 56; and Max Müller, vol. ii., p. 142.

= κλέος; *s'vas* (to sigh), L. *ques-tus*, E. *wheeze*; *s'veta* (white), Goth. *hveits*, E. *white*, *wheat*, "the white plant"; *s'ata* (a hundred), Gr. ἑκατόν for ἐν-κατον, L. *centum*, Goth. *hund*, W. *kant*; *s'iras* and *s'irsha* (the head), Gr. κόρη, κάρα, L. *cerebrum*; *s'roni* (the hip), L. *clunis*: *mrs'* (to touch), L. *mulcere*; *s'ad* (to fall), L. *cadere*; *as'man* (a stone), *as'mara* (stony), Gr. ἄκμων, O. N. *hamar* (saxum, malleus), E. *hammer*; *as'vas* = Gr. ἵκκος, ἵππος, L. *equus*, Goth. *aihrs*, O. S. *ehu*, Ir. *ech*; *as'u* (quickly), Gr. ὠκύς, L. *ocius*, *accipiter*, *aquila*; *vis'* (a man), E. *wight*; *s'aiik* (to doubt), L. *cunctari*; *bhish'am* (quickly), L. *frequens*; *s'ana* (hemp), O. H. G. *hanaf*; *s'anis* (to say, praise), L. *censeo*; *s'apha* (a hoof), E. *hoof*; *s'van* (a dog), Gr. κύων, Lydian Κανδαύλης (σκυλλοπνίκτης), Median σπάκα, Z. *s'pānem* (acc. sing.), L. *canis*, Goth. *hunds*, E. *hound*. In some Sanskrit forms we see the original *k* kept as in *adikshat* = ἔδειξε from *dis'* (to point out); *dikshu*, loc. pl. of *dis'* (a region of the sky). *S'* sometimes takes the place of an original *s*. This is a change not easily explained, but in all cases I believe that it arises either from assimilation, or from the presence of a neighbouring guttural. The second *s'* in *s'as'a* (a hare), from *s'as'* (to leap), represents an original *s*, and has arisen from the assimilative power of the first *s'*; the I. E. form was *kasa*, whence G. *hase*, E. *hare*; yet we have the following gloss from Hesychius, κεκῆνας λαγρούς Κρητες, where the second *k* seems to point back to an I. E. *k*. In *s'vas'uras* = Gr. ἑκυρός, L. *socer*, the first *s'* is due to the assimilative power of the second *s'*. In the following cases *s'* has sprung from *s*, through the influence of the neighbouring guttural, *s'akrt* (dung), Gr. σκώρ, σκατός, L. *stercus*; *s'ushka* (dry)\*, Z. *huska*, L. *siccus*; *s'ambūka*, borrowed from Gr. σαμβύκη; *kēs'a* (hair),

\* Bensley explains the *s'* here by the assimilating influence of the following *sh*; but then how would he explain *s'akrt*, &c.?

E. *hair*; *kēs'ara* (juba leonis),\* L. *cæsaries* On this principle L. *sacer* has been connected with *s'ah* (to be able), but wrongly, if the O. N. *hagna* (prodesse) be from the latter root. The L. *saccharum* and E. *sugar* have been borrowed from Skr. *s'arkarâ* (gravel, clayed or candied sugar), in which *s'* = I. E. *k*, if L. *calculus*, *calx*, Gr. *κρόκη*, *κροκάλη* be connected with it. *S'* was pronounced either as *ch* in G. *mich*, or as *ssi* in E. *session*. "No simple *s* can be pronounced at the palatal point. The letter *s* is formed by the simple friction of the breath between the upper and lower teeth, and is in consequence always dental. The rushing sound of the English *sh* or the German *sch* is formed in the hollow space left between the teeth and the palatal point, and may thus be regarded both as a dental and as a palatal sound" (Lepsius' "Standard Alphabet," p. 70).

The palatal nasal was pronounced as *gn* in Fr. *campagne*, or as *n* in E. *new*.

#### §. 40. THE CEREBRALS.

The presence of the mutes and nasal of this class in Sanskrit has been generally ascribed to the influence of the Non-Aryan races of India, from whom these letters are supposed to have been borrowed. Bühler† has, however, completely overthrown this theory, and has pointed out that by far the greater number of these cerebrals is produced either by the direct change of *r*, *sh*, into them, or by the change of dentals into the corresponding cerebrals through the influence of *r*, *r̥*, *sh*, and consequently that cerebralization is entirely an Aryan proceeding, rooted in the ancient phonetic system of

\* Bopp derives *hair* for *kēs'ara* by throwing out the *s'*. He deduces *kēs'a* from *kê*, loc. of *ka* (the head), which is found in Gr. *κόμη*, L. *co-ma*, *ca-pillus*, and *s'a* for *s'aya* from *s'i* (to lie); *kēs'a* would then be "quod in capite jacet." If this derivation be correct, *s'* is original here.

† Consult Appendix A.

the language. In Prakrit these cerebral sounds have frequently supplanted the corresponding dentals, as in *baḍi* = Skr. *prati* (πρῶτι, ποτί); *paḍhama* (first) = Skr. *prathama*. In transcribing English words the Hindus at present substitute cerebrals for dentals, as in *Direkṭar*, *Gavarnment*, &c. This shows us that the ordinary English pronunciation of these words is more cerebral than dental.

*D* has sprung from *sd* in *nīḍa* (a nest) from *nī* (under) and *sad* (to lie), and therefore means "what lies under;" L. *nidus*, E. *nest*, Ir. *nead*, W. *nyth*; *pīḍ* (to press) = *pīsd* = *api-saḥ*, compare *πιέζω* = ἐπι-σεδῶ; *bād* and *vād* (to bathe) = *vasd* = *ava-sad*, from *ava* (down), and *sad*.

*Sh* = I. E. *s*; *ush* (to burn), L. *uro* for *uso*, *us-si*; *tarsh* (to be thirsty), Gr. *τέρσομαι*, L. *torreo* for *torseo*, E. *thirst*. *Sh* before *s* becomes *k*, as in *drīkshi* (thou hatest).

#### §. 41. THE DENTALS.

*T* = I. E. *t*; *tu*, Gr. *τό*, L. *is-te*; *tram*, L. *tu*; *put* (to fly), Gr. *πέτομαι*; *bharanti* = Gr. *φέρωντι*, *φέρουσι*, L. *ferunt*.

*Th* = I. E. *t*; *sthaḡ* (to cover), Gr. *στέγω*, L. *tego*; *sthā* (to stand), L. *sto*; *prath* (to extend), Gr. *πλατύς*; *asthi* (a bone), Gr. *ὀστέον*; *ratha* (a car), L. *rota*, E. *rather*.

*D* = I. E. *d*; *pad* (a foot), Gr. *πούς*, *ποδός*; *das* (to lift), E. *toss*; *dar* (to tear), Gr. *δέρω*, E. *tear*; *dam* (to tame), Gr. *δαμάω*, L. *domo*, E. *tame*.

*Dh* = I. E. *dh*; *dhûma* (smoke), Gr. *θυμός*, L. *fumus*; *dhar* (to support), Gr. *θρᾶνος*, L. *firmus*, *fortis*; *dhrâkh* (arcs-cere), L. *fraces* (lecs of oil), *floces* (lecs of wine), E. *dregs*, *dry*; *dhâ* (to place\*), Gr. *τίθημι*, L. *con-do*, E. *do*, *doom*; *vadhâ* (a wife), from a root which appears in Zend as *vad*

\* \* The late Professor Siegfried derived from this root the Keltic *datl* (judicium), whence were borrowed, according to Lottner, E. *tattle*, G. *tadel*, the termination *-tl* being = Gr. *-τρον*, L. *-trum*.

(to lead), and which has in Lithuanian the sense of *to marry* (uxorem ducere), L. *rus, vad-is* (a contract, as marriage was perhaps the earliest kind of contract known), E. *wedding*. *Dh* is sometimes reduced to *h*, as in *hitas* (part. pret. pass. of *dhāt*) = *θερός*; *-hi* (termination of 2 pers. sing. imper. act.) for *-dhi* after vowels,\* as *pāhi* (tuere), *-dhi* is still kept after consonants, as *aiddhi* (eat), and in Vedic as *s'rudhi* = *κλῦθι*.

*S* = I. E. *s*; *saptan*, L. *septem*; *svīd* (to sweat), Gr. *ιδρώς*, L. *sudō*, E. *sweat*; *as* (to be), L. *esse*. *S* is subject to many changes in Sanskrit; thus after *k*, *r*, and all the vowels, except *a* and *ā*, it becomes *sh*. In certain other cases it is represented by *h*, *r*, and *s'*; but these need not be noticed here, as they properly belong to the special Sanskrit Grammar. The change of *s* into *r* occurs also in other languages. In the Laconian dialect, final *σ* became *ρ*, as *τίρ*, *πίσορ*, for *τίς*, *πίθος*; and in Latin *s* between two vowels became *r*, as *eram* for *esam*, *quorum* = Skr. *kēshām* (*sh* for *s*, on account of preceding *e*), *quarum* = Skr. *kīsām*. *S* has frequently an aspirating influence on a following consonant, as in *sthag*, Gr. *στέγω*; *sthā*, L. *sto*; *sphāy* (to increase), Gr. *σπάω*, L. *spatium*; *asthi*, Gr. *ὀστέον*.

*R†* = I. E. *r*: *mar* (to die), L. *mori*. It is sometimes omitted in Sanskrit after an initial consonant, as in *bhañg'* (to break), L. *frango*; *bhug'* (to enjoy and endure), L. *fruo*, E. *brook*; *ghillī* (a cricket), L. *gryllus*, G. *grille*. We find a similar omission in other languages, as in Pkr. *padhamu* = Skr. *prathama*; E. *speak* = G. *sprechen*.

*L* = I. E. *r*, *lup* (to break). L. *rumpo*; *lok'* (to see) from

\* The exceptions are *ādhi* (be), *s'ūdhi* (rule) *guhudhi* (offer). *Līdhi* (lick) is for *līddhi*.

† Schleicher and others place *r* and *l* among the cerebrals; but, as they appear to be closely connected with the dentals, it is perhaps better to place them among the latter. This question, however, requires a much more complete investigation than it has yet received.

*ruch* (to shine); *kalp* (to prosper), from *karp*. *L* = I. E. *l*; see §. 21.\*

*N* = I. E. *n*; *nas'* (to die), *νέκυς*, L. *noceo*; *nara* (a man), *ἀνήρ*, L. *Nero*. *N* is frequently changed into another nasal for phonetic reasons; thus we have *πυρῆα* (full), where *η* takes the place of *n*, on account of the preceding *r*, and in general the nasal belongs to the same class as the following consonant, as *γυῖνῃ'anti* = L. *jungunt*, *lumpati* = L. *rumpit*.

## §. 42. THE LABIALS.

*P* = I. E. *p*; *pati* (a master), Gr. *δεσπότης* (lit. 'a master of slaves,' Skr. *dāsa*, a slave); *pitar*, Gr. *πατήρ*; *pā* (to drink),\* Gr. *πίνω*, L. *potus*; *pyai* (to increase), *pīvan* (fat), Gr. *πίων*, *πίαρ*, L. *pinguis*, E. *fat*; *pis'* (to adorn), *pés'alus* (beautiful) =, Gr. *ποικίλος*, *pūy* (to putrefy), Gr. *πῦος*, *πύθω*, L. *pus*, *putris*, E. *foul*; *prī* (to love), Gr. *πρῖος*, E. *friend*; *pas'u* (cattle), Gr. *πῶν* (?), L. *pecus*, Goth. *faihu*, A. S. *feoh*, E. *fee*.

*Ph* has generally arisen from an I. E. *p*, perhaps through the influence of a preceding *s*, as in *sphatika* (crystal), G. *spath*; *sphut* (to burst), E. *split*; *sphuv* (to tremble, to strike), Gr. *ἀσπαίρω*; Skr. *phēna* (foam), L. *spuma*, E. *foam*; *phalu* (fruit) for *spalu*, lit. 'what may be split,' or from *ḥhala*, L. *flos*, E. *bloom*.

*B* = I. E. *b* (§. 22), or = I. E. *bh* (§. 22).

*Bh* = I. E. *bh*; *bhar* (to bear), Gr. *φέρω*, L. *fero*; *bhid* (to cleave), L. *findo*, E. *bite*; *abhi* (towards), Gr. *ἀμφι*, E. *by*. *Bh* is in some cases reduced to *h*, as in *grah* (to seize), from Ved. *grabh*, *mahyan* (to me) = L. *mihi*, beside *tubhyan* = L. *tibi*.

\* *L* does not exist in Zend. The Chinese, on the other hand, always use *l* for *r*, as *Eulopu* for *Europe*, *Killissetu* for *Christ*, *Yamelika* for *America*. The New Zealanders have no *l*. They say *Rota* for *Lot*, *Horomona* for *Solomon*.

† *P* here may represent an I. E. *bh*, if L. *bibo*, E. *beer*, be from this root. We have a trace of the *b* in Skr. *pibāmi* (I drink). •

*V* allows consonants to stand after it, which is hardly ever the case with *y*. It is frequently interchanged with *b*. In *drapsa* (a drop), from *drav* (*dru* gunated), the *v* is changed into *p* on account of the following hard *s*, as in Mod. Gr. ἔκλαψα from ἔκλαυσα. The interchange of *b* and *v* is of common occurrence, as L. *habere*, Fr. *avoir*, L. *cantabam*, It. *cantava*; *berber* (in Sallian Hymn) = *fervere*; *Vesuvius* = Βέσβιος; *-ber* in *September*, Skr. *vīra* (time); *Vesontio* = *Besançon*. Bopp considers that *v* has been hardened into a guttural in the following cases: Skr. *g'iv* (to live), L. *vivo*, *vivi*, E. *quick*, Skr. *bhāvayāmi* (I make to be) = L. *facio*; Skr. *dēvaras* = L. *levir*, A. S. *tācor*, O. H. G. *zeihur*; Skr. *naus* = Gr. ναῦς, L. *navis*, A. S. *naca*, O. H. G. *nacho*. In this opinion he appears to be mistaken; and it is far more likely that an original guttural has fallen out in *levir* and *vivo*, than that *v* should have been hardened into one; as to *facio*, it is not from *bhāvayāmi*; and in the case of A. S. *naca*, we have a different termination from the *va* in *nāu*, which is for *snā-va*. *V*, according to Bopp, is sometimes changed into *l*, as in L. *-lent* = Gr. -ἔντ = Skr. *-vant*; Skr. *svadus* (sweet) = Lith. *saldūs* (sweet); Skr. *svapnas* (sleep) = Gr. ὕπνος = E. *sleep*.\* Similarly *v* becomes *r*, as in L. *cras* = Skr. *s'vas*; L. *ploro* = Skr. *plāvayāmi*; Kr. *ῥέ* = Skr. *tvām*; Goth. *driusan* (to fall) = Skr. *dhvañs*; O. H. G. *pirumes* = Skr. *bhavāmas*; O. H. G. *scrirumes* = Skr. *s'rāvayāmas*; Ir. *raidim* (I say), Goth. *raſda* (speech), Skr. *vad* (to speak).

*M* = I. E. *m*: *manas* = Gr. μένος, L. *mens*; *smar* (to remember, L. *memor*; *as'vam* = L. *equum*; *syām* = L. *siem*.

§. 43. When one consonant follows another, the law that

\* Notwithstanding the parallel case of Lith. *saldūs* = Skr. *svadus*, the connexion of E. *sleep* with Skr. *svapna* is very unlikely, on account both of the long vowel (Goth. *slēpan* O. H. G. *slāfan*) and the *p*, which should be *f*, according to Grimm's law. Moreover, the root *swap* appears in O. N. *svefn* (somnus), O. H. G. *swehjan* (sopire), A. S. *sweſian*. Lottner connects E. *sleep* with O. H. G. *slaph* (languidus).

governs them is this, 'sonants follow sonants only, and surds surds only:' thus *vāk'* (speech), inst. pl. *vāgbhis*, *yunaḡmi* (I join), *janakti* (he joins); *aḥmi* (I eat), *atsi* (thou eatest). Only one consonant is permitted to end a word; when several consonants occur together, all but the first are thrown off: thus, *vāk'*, nom. sing. *vāk* for *vāksh*, and this for *vāk-s*. Tenuis alone are allowed as final consonants, the mediæ and aspirates being changed into the corresponding tenuis; but when this final tenuis comes before a word beginning with a sonant or a vowel, it becomes the corresponding sonant, the tenuis being therefore retained only before a pause and a following tenuis; thus *harit* (green), *mud* (joy), *yudh* (a fight), become *harit*, *mut*, and *yut* before a pause; but we have *harid bhavati* (viridus est), *mud bhavati* (gaudium est), *yud asti* (pugna est). For further information on this subject, the reader is referred to the special Sanskrit Grammar.

# CHAPTER V.

## THE GREEK ALPHABET.\*

### §. 44. TABULAR VIEW OF THE SOUNDS.

| MUTES.         |             |       | SEMIVOWELS.      |      |                |                         | VOWELS.   |
|----------------|-------------|-------|------------------|------|----------------|-------------------------|-----------|
| <i>unaspr.</i> | <i>asp.</i> |       | <i>Spirants.</i> |      | <i>Nasals.</i> | <i>r &amp; l-sounds</i> |           |
| surd.          | son.        | surd. | surd.            | son. | son.           | son.                    |           |
| Gutt. κ        | γ           |       |                  |      | γ              |                         | α ā } ε η |
| Pal.           |             |       |                  |      |                |                         | ι î } ω   |
| Cor.           |             |       |                  |      |                | (t, λ)?                 |           |
| Dent. τ        | θ           | θ     | σ                | (σ)  | ν              | β, λ                    | υ ū } αω  |
| Lab. π         | β           | φ     |                  | φ    | μ              |                         | (ου)      |

Ζ, Ξ, and Ψ were called *σύνφωνα διπλά*; but Ζ differs from Ξ and Ψ in this, that it is a consonantal diphthong, being equivalent properly to *dy*, while Ξ and Ψ are merely signs for *κς* and *πς*. It is a mistake to suppose that Ζ is equivalent to *δσ*; for such a combination is impossible, as δ is a sonant, and σ a surd. Before the introduction of the symbols Ξ and Ψ, the Greeks frequently used *χσ* and *φσ* instead of them. The Romans also must have aspirated the κ and π in their pronunciation of Ξ and Ψ; for Priscian\* writes, "multo molliorem et volubiliorem sonitum habet ψ quam ps vel bs;" and again, "sicut ergo ψ melius (mollius?) sonat quam ps vel bs, sic x etiam quam gs vel cs." In Zend a similar phenomenon occurs; thus the nom. sing. of *ap* (aqua) is *āfs*, and of *vīk'* (vox), *vīkhs*. Σ seems in some cases to have been soft, as in *σβέννυμι*, *ἄσβολος*, *μίσγω*, *ὔσγη*, and the Æolic *Σδεύς* for *Ζεύς*, *σδυγός* for *ζυγός*, *βρίσδα* for *ρίζα*. Plato placed σ among the *ἄφωνα*. He says, τὸ σῖγμα

\* Böhrling (K. Z., vol. xv., p. 148), however, considers that Priscian means that ψ sounded as *bz*, and x as *gz*, as in Fr. *examen*.

τῶν ἀφώνων ἐστὶ, ψόφος τις μόνον, οἶον συριττοῦσης τῆς γλώττης. "Αφωνα, however, in Plato's language, included both the semivowels (φωνήεντα μὲν οὐ, οὐ μέντοι γε ἄφθογγα), and the mutes (ἄφθογγα) : consult Plato, *Kratyl.* 424, C.

#### §. 45. PRONUNCIATION OF THE VOWELS.

Υ was originally a pure *u*, but in early times it became *ü*. This was the first beginning of that tendency in Greek towards allowing the *i*-sound to predominate over the other vowels, which so strongly characterizes Modern Greek. When *u* became *ü*, the pure *u*-sound was expressed by *ου*. This pure sound was retained by the Bæotians; they wrote *τού*, or *τούν* for *σύ*, *κοῦμα* for *κύμα*, *γλουκού* for *γλυκύ*, &c. In the Laconian dialect we also find *τούνη* for *συ*, *κάρουα* for *κάρυα*, *μοῦῖαι* for *μυῖαι*, &c. In Mod. Gr. υ has the sound of *i*; but it could not have had this sound in classical Greek, for it was pronounced with contracted lips (*μύοντες τὰ χεῖλη*), and it is impossible to pronounce a pure *i* in that position. The old pure sound of *υ* was kept\* in the diphthongs *au*, *eu*, and *ou*; for these must have arisen in early times, before *υ* had become *ü*, and in the cases where *υ* represents *Ϝ*, it must have had the sound of the pure *u*. Moreover, if *υ* in these diphthongs had been pronounced *ü*, the Mod. Gr. pronunciation *av*, *ev*, *ov*, would be inexplicable. We find also on inscriptions *φεογειν*, *Εὐεργετης*, *αὐτους*, &c., for *φεύγειν*, *Εὐεργέτης*, *αὐτούς*, &c., which forms teach us the same fact. *Ou* in a later period lost its diphthongal pronunciation, and became a pure *ü*; this could not have happened, had *υ* in *ou* been pronounced as *ü*. This is corroborated by the fact that the junction of *ο* and *υ* never forms the diphthong *ou*, but that they are pronounced separately, as in *ὀλιγούπνος*. The old name of *ὁ μικρόν* was *οῦ*, and at Athens, before Ol. 100, *ο* was always written in place

of the later *ou*, where this *ou* arose either from contraction, or from mere lengthening, whether arising from the falling out of a consonant, or from any other cause, wherever, therefore, the Doric had *ω*: on the other hand, *ou* was written wherever *υ* was original, whether as representing *F* or for some other reason; thus we have *τος* for *τούς*, from *τους*, *εκ το κοινο* for *ἐκ τοῦ κοινοῦ*, &c., but always *οὐκ* and *οὔτος*, in both of which words the Doric has also *ou*.\* In early times *ο* was used to express both the long and short clear *ο* and the long and short obscure *ο*. The latter sound became *û* (*ou*), the former *ω* (= *oo*). The clear sound prevailed in early times, and hence we have *λέων*, *λέγων*, &c. for *λεοντες*, *λεγοντες*, &c.; for *ο* was lengthened to compensate for the throwing out of the consonants at a time when it still had the clear sound. The augment *ε* before *ο* coalesced with this *ο* into *ω*, for this change likewise occurred at an early period. On the other hand, in *τούς* for *τους*, *λέγουσι* for *λέγοντι*, the *υ* remained in long; and when it was thrown out *ο* had become obscure, and therefore the *u*-sound (*ou*) took its place. Similarly in Old Latin, *ο* had both a clear and an obscure sound: the obscure *ο* became *u*, as in *legunt*, *vulgus*, from O. L. *legont*, *volgus*, while the clear *ο* remained unchanged, as in *colo*, *honestus*. When *ο* was succeeded by a vowel, it in some cases seems to have had the sound of *uw*; thus we have, *δά* for the Persian *wah*, *Ῥάξος* for *Φάξος*, *Ῥασις* from Ar. *wadi*, *δοάν* for *δφην*, *Κοῖντιος* for *Quinctius*, and perhaps in *οἶστρος*, the gadfly, so called from its *whizzing* noise.

As *ο* was written *ou* before the Archonship of Eukleides, so *ε* was written for *ει*. *Ει* was however written in full wherever the *ι* was original, as in *ἔχει*, *λείος*, *πόλει* (dat. sing.); but where *ει* arose either from contraction or any other cause, *ε* is found, as in *πολες* for *πόλεις*, *εργασται* for *ἐργασται*, *κλεγενες* for *κλειγένης*, *ενθεναι* for *ἐνθεῖναι*. In this latter case the Æolians wrote *η* for *ει*, as in *συμφέρην*, *χίρ*, *τρῆς*. We

find one exception to this rule; for on inscriptions we find *ειπεν* for *εἶπεν* and *ειπεῖν*, though the root *ἔειπ* contains no *ι* originally; the Æolians also wrote *εἶπην* for *εἶπεῖν*. *Ε* had two sounds in early Greek, the one approaching *α* (*e<sup>a</sup>*), the other approaching *ι* (*e<sup>i</sup>*); *e<sup>a</sup>*, when lengthened, became *η*, and *e<sup>i</sup>*, *ει*. The former sound was older than the latter; and hence, when phonetic changes requiring *ε* to be lengthened occurred in early times, it became *η*, whereas in changes of later origin *ε<sup>i</sup>* became *ει*. Thus we have *ἦρχετο*, *ἦθελον*, beside *εἶχον* (= *εσεχον*), *εἰπόμην* (= *εφεπομην*), *εἰργασμει* (= *φεφεργασμ.ι*), for the consonants in these cases were not thrown out till late; -*ηρ*, -*ην*, -*ης* (in *αἰθήρ*, *τέρην*, *εὐγενής*), for -*ερς*, -*ενς*, -*ιςς*, beside -*εις* (in *χαρίεις*, *τίθεις*), for -*εντς*, as in the former cases the nom. sing. *σ* was early lost, while in the latter *ν* remained in till a later period.

The Boeotic is a stage in advance of the Attic, for in it we find *ει* for *η*, as in *ἐβδόμεικοντα*, where -*μει*- for -*μα*- must have passed through the stage -*μη*-, *πένεις* for *πένης*, *τίθειμι* for *τίθημι*; *η* for *αι*; as in *κη* for *καὶ*, *τύποιη* for *τύπτομαι*; and *ι* for *ει*, as in *λέγεις* for *λέγεις*, *ἡί* for *αἰεί*. While *ει* in Greek, and *ei* in Latin gradually approached *ι* in pronunciation, the English *ι* conversely is pronounced as *ei*; similarly, while *ου* in Greek and *ou* in Latin approached *û*, the N. H. G. *au* has been developed from the M. H. G. *û*, as in *haus* from *hus*. *Η* in classical Greek never could have had the sound of *ι*, for the bleating of sheep is represented by *βῆ*. The diphthongs *au* and *oi* were probably pronounced as E. *ou* and *ee*; for in Aristophanes (*Vesp.* 903), a dog's bark is *αῦ*, *αῦ*, and a bird's note is *ποῖ* (*Aves*, 227), compare E. *pewit*.

#### §. 46 PRONUNCIATION OF THE ASPIRATES.\*

The aspirates were originally hard sounds; for before the introduction of the signs, *θ*, *χ*, *φ*, they were written, *TH*,

\* Consult Raumer, "Gesammelte sprachwissenschaftliche Schriften," p. 96; and Curtius, "Grundzüge," p. 370.

ΚΗ, ΠΗ, as in ΕΠΕΥΚΗΜΕΝΟΣ, ΕΚΠΗΑΝΤΟΙ, on the Columna Naniana ; moreover, we find them reduplicated by the tenues, as in *τίθημι, κέχυκα* ; and in addition, when the Ionic dialect separated from the parent stock, they must have been hard, for we frequently find them represented in it by the tenues. These hard aspirates were originally soft, and traces of this fact still manifest themselves, as in *Φιδάκνη* = *Πιθάκνη*, *Τελχίνες* = *Θελγίνες*, *φέβομαι* for *φεβιομαι*, an irregularly reduplicated form of the same root as the Skr. *bhī* (timere). Curtius attempts to account for the origin of these hard aspirates from the I. E. *gh*, *dh*, and *bh*, by supposing that the *h* in these latter was hard, and that it assimilated to itself the preceding mediæ, just as *β* in R. *βλαβ* becomes *π* before *τ* in *βλαπτός*. This explanation is, however, perfectly untenable. The aspirates were also in classical Greek actually double sounds, as we see (1) from the moveableness of the aspiration in reduplicated syllables, in *θρέψω* from *τρέφω*, in Ion. *ἐνθαῦτα* = *ἐνταῦθα*, Ion. *κιδών* = *χιδών*, in *ἀφ' οὗ* from *ἀπ' οὗ*, &c. ; (2) from the way in which Barbarians pronounced Greek, as *αἰτρίαν*, *πυλάξι* (Thesmoph. 1001, seq.), *ὄρνιτο* (Aves, 1678) ; (3) from the way in which they were transliterated in the older Latin, where *t* = *θ*, *c* = *χ*, *p* or *b* = *φ*, as in *tesaurus*, *Corintus*, *tiasus*, *culx* (= *χάλιξ*), *Nicomacus*, *Aciles*, *Poinos* (= *Φοῖνιξ*), *Pilemo* (= *Φιλήμων*), *Nicepor* (= *Νικηφόρος*), *purpura* (= *πορφυρεῖα*), *Burrus* (= *Πύρρος*), *Bruges* (= *Φρύγες*) ; (4) Dionysius of Halikarnassus states that in the case of the aspirates there was a *προσθήκη τοῦ πνεύματος* ; (5) in Modern Greek in some cases the tenuis represents the old aspirate, which could not be accounted for if *θ*, *χ*, *φ* had been spirants, as *ἔκω*, *στοκάζομαι*, *τεκνίτης* in Rhodian dialect, *τέλω* = *θέλω* among Asiatic Greeks, and *λευτερόνω* = *ἐλευθερόνω*, in the Peloponnesus. Those who disagree with the preceding view of the aspirates bring forward in support of their opinion, that they were not true aspirates, the fact that we find such combinations as *φλ*, *χθ*, *φθ*, *χς* (= *ξ* anciently),

and ask how could these be pronounced if  $\theta$ ,  $\chi$ , and  $\phi$  were true aspirates. But this is a very unsafe foundation on which to build; for we are not likely to be good judges of what the ancient Greeks could pronounce, and the mere fact that we are unable to pronounce a certain combination of letters does not prove that others could not pronounce it. The statement of Priscian, that the only difference between  $f$  and  $\phi$  was that  $\phi$  was pronounced *juxta labris*, only proves that in his time  $\phi$  had become a spirant—not, however, a labiodental like  $f$  and Mod. Gr.  $\phi$ , but rather an interlabial.

### §. 47. THE VOWELS.

An original  $a$  often vanishes, as in  $\gammaίγνομαι$  for  $\gammaιγενομαι$ , from R.  $\gammaεν$ , Skr.  $g'an$ :  $\piίπτω$  for  $\πιπιετω$  from R.  $\piετ$ , Skr.  $pat$  (to fall);  $\piατρός$  = Hom.  $\piατέροϛ$ . It is generally retained, when it is initial, as in  $\epsilonῖσμεν$  = Skr.  $smas$  (we are), L. *sumus*;  $\epsilonἶην$  = Skr. *syām*, L. *siem*.

$\check{a}$  = I. E.  $\check{a}$ :  $\acute{\alpha}\pi\acute{o}$  = L. *ab* = Skr. *apa* (away);  $\acute{\alpha}\kappa\omega\nu$ , L. *acus*, *acies*;  $\delta\acute{\alpha}\kappa\rho\nu$ , Skr. *asru* (a tear);  $\acute{\alpha}\gamma\omega$ , L. *ago*, Skr. *ag'* (to go).

$\check{a}$  = I. E. *am* and *an*:  $\epsilon\pi\acute{\tau}\acute{\alpha}$  = Skr. *saptan*;  $\epsilon\nu\acute{\nu}\epsilon\alpha$  = Skr. *navan*;  $\delta\acute{\epsilon}\kappa\alpha$  = Skr. *das'an*;  $\epsilon\delta\epsilon\iota\chi\alpha$  = Skr. *adiksham*;  $\pi\acute{o}\delta\alpha$  = Skr. *paulam*,  $\pi\alpha\tau\acute{\epsilon}\rho\alpha$  = Skr. *pitarām*.

$\epsilon$  = I. E.  $\check{a}$ :  $\epsilon\sigma\tau\iota$  = Skr. *asti*;  $\phi\acute{\epsilon}\rho\omega$  = Skr. *bharāmi*;  $\tau\acute{\epsilon}\tau\tau\alpha\rho\epsilon\varsigma$  = Skr. *k'atvāras*;  $\phi\lambda\acute{\epsilon}\gamma\omega$ , L. *flagro*;  $\pi\alpha\tau\acute{\epsilon}\rho\alpha$  = Skr. *pitarām*;  $\epsilon\chi\iota\varsigma$ , L. *anguis*. We find  $\epsilon$  and  $a$  standing beside each other in many grammatical forms:  $\tau\acute{\epsilon}\mu\nu\omega$ ,  $\epsilon\tau\alpha\mu\omicron\nu$ ;  $\tau\rho\acute{\epsilon}\pi\omega$ ,  $\epsilon\tau\rho\alpha\pi\omicron\nu$ ;  $\sigma\rho\acute{\epsilon}\phi\omega$ ,  $\epsilon\sigma\rho\acute{\alpha}\phi\eta\nu$ ;  $\delta\acute{\epsilon}\rho\kappa\omega$ ,  $\epsilon\delta\rho\alpha\kappa\omicron\nu$ ;  $\pi\acute{\alpha}\sigma\chi\omega$ ,  $\pi\acute{\epsilon}\iota\sigma\omicron\mu\alpha\iota$ . In the dialects  $\epsilon$  and  $a$  are frequently interchanged;  $\sigma\rho\acute{\epsilon}\phi\omega$ , Dor.  $\sigma\rho\acute{\alpha}\phi\omega$ ;  $\tau\acute{\epsilon}\mu\nu\omega$ , Dor.  $\tau\acute{\alpha}\mu\nu\omega$ ;  $\pi\acute{\epsilon}\acute{\zeta}\omega$ , Dor.  $\pi\acute{\iota}\acute{\alpha}\acute{\zeta}\omega$ ;  $\text{Ἄρτεμις}$ , Dor.  $\text{Ἄρταμις}$ ;  $\iota\acute{\epsilon}\rho\acute{o}\varsigma$ , Dor.  $\iota\acute{\alpha}\rho\acute{o}\varsigma$ ;  $\omicron\tau\epsilon$ , Æol.  $\omicron\tau\alpha$ ;  $\kappa\rho\acute{\alpha}\tau\omicron\varsigma$ , Æol.  $\kappa\rho\acute{\epsilon}\tau\omicron\varsigma$ ;  $\theta\acute{\alpha}\rho\sigma\omicron\varsigma$ , Æol.  $\theta\acute{\epsilon}\rho\sigma\omicron\varsigma$ ;  $\lambda\epsilon\gamma\acute{o}\mu\epsilon\theta\alpha$ , Æol.  $\lambda\epsilon\gamma\acute{o}\mu\epsilon\theta\epsilon\nu$ ;  $\beta\acute{\alpha}\rho\alpha\theta\rho\omicron\nu$ , Arkad.  $\zeta\acute{\epsilon}\rho\epsilon\theta\rho\omicron\nu$ , Ion.  $\beta\acute{\epsilon}\rho\epsilon\theta\rho\omicron\nu$ ;  $\beta\acute{\alpha}\lambda\lambda\omega$ , Arkad.  $\zeta\acute{\epsilon}\lambda\lambda\acute{\omega}$ ;  $\acute{\alpha}\rho\sigma\eta\nu$ , Ion.  $\epsilon\acute{\rho}\sigma\eta\nu$ ;  $\omicron\rho\acute{\alpha}\omega$ , Ion.  $\omicron\rho\acute{\epsilon}\omega$ . As Dor.  $\check{a}$  = Att.  $\epsilon$ , so Doric  $\bar{a}$  = Ion. and Att.  $\eta$ , wherever this  $\eta$  re-

presents an original *a*. So also  $\eta$  = Skr. *á*, as *τίθημι* = Skr. *dadhāmi*.

*o* = I. E. *ǎ*: *νέφος* = Skr. *navas* (new); *πάτος* = Skr. *pa-thas* (a path); *πόσις* = Skr. *patis* (a master); *μένος* = Skr. *ma-nas* (mind). In the dialects we find *o* and *a* frequently interchanged: *ἔκοσι*, Dor. *ἑκατι*; *τριάκοντι*, Dor. *τριάκατι*; *ὄνειρον*, Kret. *ἄναιρον*; *τέσσαρες*, Dor. *τέτορες*, where *o* perhaps represents the original *Fa*; *ὑπό*, Æol. *ὑπά*; *ἀνά*, Æol. *ὄν*; *βραχέως*, Æol. *βροχέως*; *ἐκατόν*, Arkad. *ἐκοτόν*; *καρδία*, Kypr. *κόρζα*; *ὀρώδειν*, Ion. *ἀρώδειν*. Similarly we find *λαίνα* (= *λεανα*) beside *λέων*, st. *λεοντ*; *τέκταινα* (= *τεκτανα*) beside *τεκτον*; *ἄμα* beside *ὁμός*, &c. As Dor. *a* = Att. *o*, so Doric *ā* = Att. *ω*, as in Dor. *πρῆτος* for *πρῶτος*, Dor. *θεαρός* for *θεωρός*. So also  $\omega$  = Skr. *á*, as in *δίδωμι* = Skr. *dadāmi*. In some cases *ε* and *o* are interchanged *ὀδόντες*, Æol. *ἔδοντες*; *ὀδύνη*, Æol. *ἔδύνα*; *Κέρκυρα*, Dor. *Κόρκυρα*; *Ἀπόλλων*, Dor. *Ἀπέλλων*; *ὀβολός*, Dor. *ὀδελός*; *Ὀρχομενός*, Boeot. *Ἐρχομενός*.

*ι* = I. E. *i*: *ἵ-μεν*, R. *i*, Skr. *imasi* (we go); *λείπω*, R. *λιπ*, Skr. *rik'* (to leave), L. *linguo*; *ὀμιχεῖν*, R. *μιχ*, Skr. *mih* (mingere).

*ι* = I. E. *a*: *a* then passed through the intermediate stage *ε*, and in many cases we find side-forms containing both *ε* and *ι*: thus we have *ἴλλω* beside *ἐλύω*, *κίρνημι* beside *κεράννυμι*, *κτίννυμι* beside *κτέινω*, *κτάμεναι*, *πίλναμαι* beside *πέλας*, *πιτνημι* beside *πετάννυμι*, *πίτνω* beside *πесеῖν*, *ἴσθι* beside *ἐστί*, *νίσσομαι* beside *Νέστωρ*, *ἴζω* beside *ἔδως*. In the following cases these side-forms in *ε* do not exist: *ἵππος* = Skr. *as'vas*, L. *equus*; *κρίνω* beside L. *cerno*; *ρίζα* beside L. *radix*. *I* = *a* in reduplicated present tenses, as *τίθημι* = Skr. *dadhāmi*, *πίπτω* from R. *πετ*, *τίκτω* from R. *τεκ* for *τιτκω*. *ε* and *ι* are frequently interchanged in the dialects: Boeot. *ἰών* = *έών*, R. *ες*; Lak. *σία* = *θεά*; Kret. *θιός* = *θεός*; Dor. *ἰστία*, Ion. *ἰστίη* = *ἐστία*; Arkad. *ἰν* = *έν*; *χρύσεος* and similar adjectives in *-εος* end in *-ιος* in Æolic. In Æol. *τέρτος* = *τρίτος*, and Æol. *Πέρραμος* for *Πρίαμος*, Ahrens considers that *ι* is changed into *ε* on account of the fol-

lowing *ρ*, as in L. *tertius*, and pronunciation of E. *third*. Although an I. E. *a* can thus be weakened to *i*, the converse never occurs; this rule has long been known; for in the "Etymologicum Magnum" we are told that οὐδέποτε τὸ *ι* εἰς *α* τρέπεται.

*υ* = I. E. *u*: φύω, Skr. *bhu* (to be); ὠκύς = Skr. *ās'us* (quick); ζυγόν = Skr. *yugam* (a yoke); κλύω, Skr. *s'ru* (to hear); suffix -*τυ* in βοητός, &c., = Skr. Lith. and L. -*tu*.

• *υ* = I. E. *a*: *a* then passed through the intermediate stage *o*, and in numerous examples *o* and *υ* stand beside each other, while the Latin corresponding forms have sometimes not advanced beyond the *o*-stage, though, as we have already remarked, the Latin has generally advanced to the *u*-stage, even in cases where the Greek still keeps *o*; λύκος, L. *lupus*, from an I. E. *varkas*, as may be inferred from Skr. *vṛka* (wolf); μορμύρω, L. *murmur*, Skr. *marimara* (murmur); μύλη, L. *molo*, Lith. *malunas* (a mill), which are all derived by Max Müller from an I. E. *mar* (to rub down), with which he also connects μάρναμαι, μῶλος Ἄρεος (the toil and moil of Ares), μῶλωψ (a weal), L. *morx*, &c.: νύξ, L. *nox*, Skr. *naktam* (by night); σύν, ξύν, L. *con*, *cum*, Skr. *sam* (with); ὄνυξ, Skr. *nakha* (a nail); πανήγυρις beside ἀγορά; κύκλος = Skr. *k'akras* (a wheel); ἀνώνυμος beside ὄνομα, Skr. *nōman* (a name); the suffix -*τυρ* in μάρτυρ beside -*τορ*, nom. -*τωρ*, as in L. *daturus* beside *dator*; πρύτανις from *προ* (πρότανιος is found on a Lesbian inscription), the termination being found in ἐπηε-*τανός*, and L. *diutinus*. In γυνή *υ* represents an older *Fa*, as we see from Bæot. βανά. In Æolic *υ* frequently takes the place of *o*: ὄνυμα = ὄνομα; ὕμοιος = ὅμοιος; ἀπὺ = ἀπὸ; Ὑδυσσεύς = Ὀδυσσεύς; Ὑλυμπος = Ὀλυμπος; ὕμφαλος = ὄμφαλος; ὕσδος = ὄζος; ὕρνις = ὄρνις; μύγις = μόγις; πύταμος = πόταμος; δεῦρυ = δεῦρο. In Æolic we also find *υ* for *ω*: τέκτυν = τέκτων; χελύνη = χελώνη (compare φῶρ = L. *fur*): and *οι* for *υ* in the single case of χροισός = χρυσός. We find *υ* for *α* in Æol. σύρξ = σάρξ, and Lak. ἔγκυτα = ἔγκα-

*τα* (entrails); and *υ* for *ο* in Ion. *ρύφέω* = *ρόφέω*. The Bæotic dialect often substitutes *υ* for *οι*, and *ω*, as in *Φύκος* = *Φοῖκος*, *δάμυ* = *δήμυ*: in these cases the *ο*-sound became *υ*, and then *υι* became *ῦ*. The old Latin *oitier* must similarly have passed through *uitier* in becoming *uti*: the only difference being that the Latin *υ* is a true *υ*, while the Greek *υ* is *ῦ*. It is remarkable that the Bæotic also agrees with the Latin in sometimes representing *οι* by *οε*, as in *Διονύσοε* = *Διονύσῳ*. We find *υ* for *ο* in the Arkadian genitive in *-αυ* (*Ζαμιαυ*) from *-αο*, *-αος* = Skr. *-āyās*.\*

The old *υ* having become *υ* (*ῦ*), in some cases advanced a step farther and became *ι*: *φῑτυς* (a father), *φῑτώ* from R. *φυ*; *σίαλος* (a fat pig), from *σῦς*; *ὑπερφίαλος* beside *ὑπερφυής*; *κίρκος* (a ring), beside *κύκλος*, R. *κυρ*, from which root come also *Κέρκυρα* and *κέρκος* (a tail), *ε* arising from *ι* through the influence of the following *ρ*; *ψιθυρός* (slandorous), from *ψύθος* (a lie); *μίτυλος* and *μύτιλος* (curtailed), L. *mutilus*; *δρίος* (copsewood), from *δρυς*; *θίασος* (a band), from R. *θυ*, with same suffix as in *πέτασος*; *βίβλος* from *βύβλος* (papyrus); *ὀλιβρός* (slippery), beside L. *lubricus*; *μολιβδός* beside *μολυβδός*; *λίπτομαι* (I am eager), R. *λιφ*, Skr. *lubhyāmi* (I desire), L. *libet* and *libet*. We also find *Æol.* *ἵφος*, *ἵπερ*, *ἵπαρ* for *ῦφος*, *ὑπέρ*, *ὑπαρ*.

#### §. 48. GUNA AND VRDDHI.

The guna of *ι* is *ει*, and in a few isolated cases *αι*; its vrddhi is *οι*, *ο* here representing a Skr. *ā*. The guna of *υ* is *ευ* and *αυ*; its vrddhi is *ου* and *āv*. The I. E. *a* is represented in Greek by *α*, *ε*, *ο*; its guna is *ο*, *ā*, and *η*; its vrddhi is *ω*.

|                  |              |                |                |
|------------------|--------------|----------------|----------------|
| Primitive vowels | <i>ε ο α</i> | <i>ι</i>       | <i>υ</i>       |
| Guna             | <i>ο ā η</i> | <i>ει (αι)</i> | <i>ευ (αυ)</i> |
| Vrddhi           | <i>ω</i>     | <i>οι</i>      | <i>ου (āv)</i> |

\* Curtius, "Grundzüge," p. 646.

The guṇa of ε of the root is ο : R. γεν, γένος, γόνος ; R. φερ, φέρω, φόρος = Skr. *bhāras* (a weight) ; R. τεκ, τεκέσθαι, τόκος ; R. τρεφ, τρέφω, τροφή ; R. δερκ, δέρκομαι, δέδουκα = Skr. *dadars'a*. In μέμηλα beside μέλει, R. μελ, η appears to be the guṇa of ε of the root.

The guṇa of α of the root is ā or η ; R. λαθ, ἔλαθον, λέληθα ; R. λαβ, ἔλαβον, εἴληφα ; R. λακ, ἔλακον, λέλακα, λέληκα ; R. κλαγ, ἔκλαγον, κέκληγα ; R. δακ, ἔδακον, δέδηχα.

The guṇa of ο is ā or η : νέος = Skr. *navas* (new), νεᾶ, Ion. νέη = Skr. *navā*, and similar cases.

The vṛddhi of α, ε, ο is ω : R. Φραγ, ῥήγνυμι, ἔρρωγα ; R. πτακ, ἔπτακον, πτήσσω = πτηκω (beside πτα in κατα-πτίτην), πτώξ (cowering for fear) ; ἀρήγω, ἀρωγός ; R. ἄγ, ἄγω, ἀγωγή ; R. δο, δίδομεν, δίδωμι ; R. ὀδ, ὀδμή, ὄδωδα ; L. ἐδ (to eat), ἐδωδή.

The guṇa and vṛddhi of ι are, ει and οι ; R. ἰ, ἵμεν = Skr. *imas*, εἴμι = Skr. *emi*, οἶμος (a way) ; L. Φικ, ἔϊκ-τον, εἰκών, ἔοικα ; R. λιπ, ἔλιπον, λείπω, λοιπός ; K. Φιδ, Φίδμεν, Φεῖδος, Φοῖδα ; R. λιβ, λιβάς (a drop), λείβω, λοιβή ; K. στιχ, ἔστιχον, στείχω, στοῖχος ; R. κι, κείται = Skr. *śéle*, κοίτη ; R. δυ, δίσσθαι (to flee, to be afraid), δείδω, δείδουκα ; R. στιβ, ἔστιβον, στείβω, στοιβή ; R. λιπ, λίπα, ἀλείφω, ἀλοιφή ; R. λιχ, λιχμάω (I lick), λείχω. In αἴθεσθαι (to burn), αι is the guṇa of ι ; for it is connected with Skr. *indh* (to burn), L. *aestus*, O. H. G. *eit* (fire). The vṛddhi of this root may be found in οἷστρος (the gadfly), as G. *brenise* (the horsefly), comes from *brennen* (to burn), and L. *tabanus* is connected with Skr. *tap* (to burn).

The guṇa and vṛddhi of υ are ευ and ου, but ευ nearly always takes the place of ου : R. ελυθ, ἤλυθον, ἐλεύσομαι, εἰλήλουθα ; κέλευθος, ἀκόλουθος ; R. ρυθ, ἐρυθρός, ἐρεύθω (I make red), ρούσιος (reddish) ; R. λυκ, ἀμφιλύκη (the dawn), λευκός, λοῦσσον (the white pith of the fir tree) ; R. πνυ, πνέΦω, πνοΦή ; R. φυγ, ἔφυγον, φεύγω, πέφευγα.

Schleicher considers *av* to be the *guṇa* of *v* in *aŭω* (I kindle), for *aŭσω*, beside *εŭω* (I singe), Skr. *ush* (to burn), *ôshami* (I burn), L. *uro* for *uso*; in *aŭγή* (splendour) beside Skr. *ôg'as* (strength and splendour); and in *aŭξανω* from R. *vy*, beside Skr. *ug-ra* (strong). In the first two of these examples, however, he is probably wrong, and in the last certainly so; for Skr. *ush* is from an older *vas*, which is found in *vásara* (a day), *ôg'as* is from *vag'* (to strengthen), L. *vigere*, *vegere*, and *aŭξανω* from R. *Faξ*, Skr. *vakshâmi* (I grow), Goth. *vahsja* (I grow). In the first two cases the old *Fa* probably became *aF* by transposition, and then *av*, and in the last case we find Hom. *ἀέξω* = *aŭξω*, which points back to a form *âFεξω*, where *ε* is merely a help-vowel, and where we find *a* and *F* already transposed. If *vaŭς*, Ion. *νηŭς*, comes from R. *σνυ*, Skr. *snu* (to flow), *āu* is here the *vr̥ddhi* of *v*: on the other hand, if it comes from R. *σνᾶ*, Skr. *snâ* (to bathe), it is formed like *γρᾶŭς*, and *āu* is therefore not the *vr̥ddhi* of *v*.<sup>\*</sup> In the following cases *ω* appears to be the *vr̥ddhi* of *v*; *ζωμός* (broth) beside *ζύμη* (leaven), L. *jus*; *ζώννυμι* (I gird), from R. *ζυ*; *χώννυμι* (I heap up) from R. *χυ*. Curtius considers that *ω* arose from *v* through the intermediate step *oF*. Schleicher's view is that, as we have Ion. *πλώω* for *πλώFω* beside *πλέFω*, and Dor. *βῶς* = *βοŭς* = Skr. *gâus*, and Ionic diphthong *ωv* for *av*, so there once, as *vr̥ddhi* of *v*, existed *ωv* = Skr. *âu*, the first element of which gradually assimilated to itself the second, so that finally only the *o*-sound was heard.

We must carefully distinguish from the diphthongs arising from *guṇa* and *vr̥ddhi*, those which arise from contraction or from compensation for the loss of consonants or from the vocalization and hyperthesis of the original spirants *y* and *v*.

§. 49. When a consonant or consonants are thrown out of a word, the preceding vowel is generally lengthened, to compensate for the loss of the consonants. Thus *a* becomes

<sup>\*</sup> Curtius, "Grundzüge," pp. 161, 281.

$\bar{a}$  in  $\pi\acute{\upsilon}\lambda\bar{a}\varsigma$  (acc. pl.) =  $\pi\acute{\upsilon}\lambda\alpha\nu\varsigma$ , &c.,  $\iota\sigma\acute{\tau}\acute{\alpha}\varsigma$  =  $\iota\sigma\tau\alpha\nu\tau\varsigma$ , &c.;  $a$  becomes  $ai$  in the Lesbian Æolic acc. pl. term.  $-\alpha\iota\varsigma$  = Kret.  $-\alpha\nu\varsigma$ , as  $\tau\alpha\iota\varsigma$  = Kret.  $\tau\acute{\alpha}\nu\varsigma$ , also in Lesb. Æol.  $\tau\acute{\alpha}\lambda\alpha\iota\varsigma$  =  $\tau\alpha\lambda\alpha\nu\varsigma$ ,  $\pi\alpha\iota\varsigma$  =  $\pi\alpha\nu\varsigma$  for  $\pi\alpha\nu\tau\varsigma$ ,  $\acute{\alpha}\kappa\omicron\upsilon\sigma\alpha\iota\varsigma$  =  $\acute{\alpha}\kappa\omicron\upsilon\sigma\alpha\nu\varsigma$ ;  $u$  becomes  $\bar{u}$  in  $\delta\epsilon\iota\kappa\nu\acute{\nu}\varsigma$  =  $\delta\epsilon\iota\kappa\nu\nu\tau\varsigma$ ;  $\epsilon$  becomes  $\eta$  in  $\pi\alpha\tau\acute{\eta}\rho$  =  $\pi\alpha\tau\epsilon\rho\varsigma$ ,  $\pi\omicron\iota\mu\acute{\eta}\nu$  =  $\pi\omicron\iota\mu\epsilon\nu\varsigma$ ,  $\delta\upsilon\sigma\mu\epsilon\nu\acute{\eta}\varsigma$  =  $\delta\upsilon\sigma\mu\epsilon\nu\epsilon\varsigma$ ;  $\epsilon$  becomes  $\epsilon\iota$  in  $\tau\iota\theta\epsilon\iota\varsigma$  = Kret.  $\tau\iota\theta\acute{\epsilon}\nu\varsigma$  for  $\tau\iota\theta\epsilon\nu\tau\varsigma$ ,  $\epsilon\iota\varsigma$  = Kret.  $\acute{\epsilon}\nu\varsigma$ ,  $\chi\epsilon\iota\rho$  =  $\chi\acute{\epsilon}\rho\varsigma$ , which is still found in a fragment of Timocreon,  $\epsilon\iota\mu\acute{\iota}$  (I am) =  $\acute{\epsilon}\sigma\mu\iota$ , Æol.  $\xi\mu\iota$ ,  $\acute{\omicron}\rho\epsilon\iota\nu\acute{\omicron}\varsigma$  =  $\acute{\omicron}\rho\epsilon\sigma\nu\omicron\varsigma$ , Æol.  $\acute{\omicron}\rho\epsilon\nu\nu\omicron\varsigma$ ,  $\acute{\epsilon}\nu\epsilon\iota\mu\alpha$  =  $\acute{\epsilon}\nu\epsilon\mu\sigma\alpha$ , Æol.  $\acute{\epsilon}\nu\acute{\epsilon}\mu\mu\alpha\tau\omicron$ ;  $o$  becomes  $\omega$  in  $\tau\acute{\upsilon}\pi\tau\omega\nu$  =  $\tau\upsilon\pi\tau\omicron\nu\tau\varsigma$ ,  $\acute{\eta}\gamma\acute{\eta}\tau\omega\rho$  (a leader) =  $\acute{\eta}\gamma\eta\tau\omicron\rho\varsigma$ ;  $o$  becomes  $ou$  in  $\acute{\iota}\pi\pi\omicron\upsilon\varsigma$  = Kret.  $\acute{\iota}\pi\pi\omicron\nu\varsigma$ , &c.,  $\acute{\upsilon}\pi\alpha\rho\chi\omicron\upsilon\sigma\alpha\varsigma$  = Kret.  $\acute{\upsilon}\pi\alpha\rho\chi\acute{\omicron}\nu\sigma\alpha\varsigma$ ,  $\acute{\alpha}\gamma\omicron\upsilon\sigma\iota$  = Dor.  $\acute{\alpha}\gamma\omicron\nu\tau\iota$ ;  $o$  becomes  $oi$  in the Lesb. Æol. acc. pl. term.  $-\omicron\iota\varsigma$  = Kret.  $-\omicron\nu\varsigma$ , as  $\tau\omicron\iota\varsigma$  = Kret.  $\tau\acute{\omicron}\acute{\upsilon}\varsigma$ , also in  $\xi\chi\omicron\iota\sigma\alpha$  =  $\acute{\epsilon}\chi\omicron\nu\tau\gamma\alpha$ , &c.,  $\kappa\rho\acute{\upsilon}\pi\tau\omicron\iota\sigma\iota\nu$  =  $\kappa\rho\acute{\upsilon}\pi\tau\omicron\nu\tau\iota$ , &c. We have already pointed out that, when a consonant was lost in early times, and compensation was made for it,  $\epsilon$  became  $\eta$ , and  $o$  became  $\omega$ ; but that, on the other hand, when the loss did not occur till a later period,  $\epsilon$  became  $\epsilon\iota$ , and  $o$  became  $ou$ . The examples from the dialects above quoted confirm this account of the matter; for we find that the consonants are frequently kept by them in the latter case, but never in the former.

§. 50. The vowels  $\epsilon$  and  $\upsilon$ , when coming after a semi-vowel, are frequently thrown back by hyperthesis. Thus,  $\phi\acute{\epsilon}\rho\epsilon\iota\varsigma$  =  $\phi\epsilon\rho\epsilon\iota\sigma\iota$  = I. E.  $bharasi$ ;  $\acute{\upsilon}\pi\acute{\epsilon}\rho$  =  $\acute{\upsilon}\pi\epsilon\rho\iota$  = Skr.  $upari$  (above), Z.  $upairi$  (above);  $\acute{\epsilon}\lambda\alpha\acute{\upsilon}\nu\omega$  =  $\acute{\epsilon}\lambda\alpha\nu\omega$ . In the first stage of hyperthesis, the vowel is not only reflected, but also kept in its original place, as in Zend, where we find  $upairi$  (above),  $bavaiti$  = Skr.  $bhavati$  (he is), &c. In Ion.  $\pi\omicron\upsilon\lambda\acute{\upsilon}\varsigma$  =  $\pi\omicron\lambda\acute{\upsilon}\varsigma$ , and Ep.  $\epsilon\iota\nu\acute{\iota}$  =  $\acute{\epsilon}\nu\acute{\iota}$ ,  $\pi\lambda\alpha\iota\sigma\iota\omicron\nu$  (a square) =  $\pi\lambda\alpha\theta\iota\omicron\nu$  (from R.  $\pi\lambda\alpha\tau$ , whence comes  $\pi\lambda\alpha\tau\acute{\upsilon}\varsigma$ ),  $\acute{\alpha}\phi\nu\acute{\iota}\delta\iota\omicron\varsigma$  =  $\acute{\alpha}\phi\nu\acute{\iota}\delta\iota\omicron\varsigma$  (compare  $\acute{\alpha}\phi\nu\omega$ ), we have this stage of hyperthesis. When the original spirants  $y$  and  $v$  come after  $\nu$  and  $\rho$ , they are generally vocalized and thrown back. Thus  $\mu\acute{\epsilon}\lambda\alpha\iota\nu\alpha$  =  $\mu\epsilon\lambda\alpha\nu\gamma\alpha$ ;  $\kappa\acute{\epsilon}\iota\rho\omega$  =  $\kappa\epsilon\rho\gamma\omega$ ;  $\phi\theta\acute{\epsilon}\rho\omega$  =  $\phi\theta\epsilon\rho\gamma\omega$ ;  $\acute{\alpha}\mu\acute{\epsilon}\iota\nu\omega\nu$  =  $\acute{\alpha}\mu\epsilon\nu\gamma\omicron\gamma\varsigma$ ;  $\gamma\omicron\upsilon\acute{\nu}\omega$

νατος = γόνφατος ; ἄμανρός = ἄμαρφος ; ταῦρος = ταρφος, Gallic *tarvos* ; νεῦρον = νερφον, L. *nervus* ; γαῦρος (proud) = γαρφος, Skr. *garva* (pride) ; Ion. οὔλος (for ὄλος) = ὄλφος = Skr. *sarvas* (all), L. *salvus*, *sollus* ; παῦρος = παρφος, L. *parvus* ; κρίνω (ῖ) = κρινω, Æol. κρίννω ; πλύνω (ῡ) = πλυνγω ; ι + ι becoming ῖ, and υι, υ. In one case *y* after λ is vocalized and thrown back, ὀφείλω = ὀφελγω, Hom. ὀφέλλω. We have traces of the older hyperthesis in κρείσσων = κρειττων for κρεττων, New Ion. κρέσσων ; μείζων = μειγγων for μεγ-γους, New Ion. μέζων ; μάλλον = μαιλγον, θᾶσσον = θαιχγον, where ᾱ becomes ā, on account of the loss of ι. In κρείσσων, μείζων, and θᾶσσον, we find hyperthesis of *y* over mutes. We find ι thrown back also in the following cases when a mute precedes : γυναικ- = γυναικ- = I. E. *ganakī* ; αἶξ (a goat), stem αἶγ- = ἄγι-, Skr. *ag'ā* (a goat) ; ἐξαίφνης = ἐξαπίνης ; κραιπνός = κραπινος, R. καρπ, compare καρπάλιμος ; δειπνον = δεπινον or δαπινον I. *darṇinare* ; ροῖβδος = ροβδγος (Hesychius has the form ροβδεῖ) ; αἰχμή = ἀκιμη, R. ἀκ, compare ἀκίς (a point) ; αἶγλη (light) = ἀγίλη, R. ἀγ, compare Skr. *agnis* (fire) = L. *ignis*, the termination being the same as that of στρόβιλος ; αἵκλοι (Hesych. αἱ γωνίαι τοῦ βέλους) = ἀκιλοι, R. ἀκ, as in ἀκίς ; κραιπάλη = κραπιαλη, R. κραπ as in κραιπνος ; Ep. πείκω (I comb) from πεκγω beside πέκω.

§. 51. We frequently find a vowel prefixed to many Greek words, which is absent in the corresponding words in the cognate languages. This phenomenon was called by the old grammarians πρόσθεις. Curtius points out that this prosthetic vowel is generally found before double consonants, nasals, λ, ρ, and F, seldom before explosives, and never before single π, τ, and φ. Thus we have ἀσκαίρω (I skip) = σκαίρω ; ἀσταφίς (a raisin) = σταφίς ; ἄσταχυς (an ear of corn) = στάχυς ; ἀστήρ beside στεροπή, and L. *stella* ; Lesb. Æol. ἄσφε, ἄσφι = σφέ, σφί ; ἀσπαίρω (I pant) = σπαίρω ; ἀσπάλαξ (a mole) = σπάλαξ ; ἀσφάραγος (the throat), beside σφάραγος (noise) ; ἐξατράπης from Persian *kshatrapāyan* (ruling

the kingdom) beside the form *Ζατράπης* given by Hesychius; *ἐψία* (play) = *ψία*; *ἐχθίς* = *χθίς*; *ἰκτίς* (a weasel) = *κτίς*; *ὀκρυόεις*, beside *κρύος*; *ἀκροάομαι* beside Skr. *s'ru* (to hear); *ὀφρύς* = Skr. *bhrûs* (eyebrow). In some cases one of the two consonants falls out after the prosthetic vowel, as in *ὄνομα*, Ion. *οὔνομα* for *ὀγνομα*, L. *nomen* for *gnomen*; *ὀλισθάνω* for *ὀγλισθανω*, R. *γλιτ*; *ἠπανία* (want), beside *σπάνις*; *ἐρωέω* (I flow), beside Skr. *sru* (to flow); *ὀδυσσύμενος* (hating), R. *ὀδυς* for *ὀδφις* beside Skr. *dvish* (to hate). We have *ἐννέα* beside L. *novem*; *ἀνὴρ* beside L. *Nero*; *ἐνεγκεῖν* beside Sl. *nesti* (to bear); *ἐμέ* = *με*; *ὀμιχέω* beside L. *mingo*; *ἀμέλγω* beside L. *mulgeo*; *ἀμάω* beside E. *moow*; *ἐλαχύς* beside Skr. *layhu*; *Ὀλυμπος* from R. *λαμπ*; *ἐλαύνω* from R. *λα*; *ἔρεβος* beside Skr. *rag'as* (darkness); *ἔρετμος* beside L. *remus*; *ἐρυθρός* beside L. *ruber*; *ἐφέικουσι* = *φέικουσι*; *ἐφέργειν* = *φέργειν*; *ἔφεδνα* = *φέδνα*; *ἐφέρση* = *φέρση* (dew). We have in the case of the explosives, *ὀδούς* beside L. *dens*; *ὀδάξ* (mordicus) beside *δάκνω*; *ἐθέλω* = *θέλω*; *ὀβελός* beside *βέλος*; *ἀγαυός* (noble) beside *γαῦρος* (proud). The opinion that these prosthetic vowels are fragments of prepositions does not appear to rest on any sufficient ground, for the apokope of dissyllabic prepositions is limited to the Æolic and Epic dialect, and the preposition *ἐν* never loses its final consonant.\* Another explanation has been suggested to account for the vowels prefixed to *λ, μ, ν, ρ, σ*. It is this, that, as we pronounce *l, el, m, em, &c.*, so these letters were predisposed to the adoption of prosthetic vowels. In a similar way it is possible to account for the origin of *ἠνεμόεις, Πειρίθοος, οὐλόμενος* from *ἀνεμόεις, Περίθοος, ὀλόμενος*, by supposing them to have passed through the stages *ἀνεμοεις, Περιθοος, ὀλομενος*; unless the lengthening is due to the exigencies of the metre. We find in Æolic the form *ἔδοντες* for *ὀδόντες*,† and consequently some writers derive *ὀδούς* from the

\* Curtius, "Grundzüge," p. 655.

† Schleicher considers *ἔδοντες* to be the participle of *ἔδω*, poetically used for *ὀδόντες*.

R. *ἔδ* (to eat) ; but this is extremely unlikely, as the initial vowel does not appear in any of the sister languages. It is much more probable that *o* is a prosthetic vowel, as we find *ἄδαγμός* (a sting), *ἄδαξέω* and *ὀδάξω* (I bite, sting), beside *δάκνω*. *Ὀφρύς* has been treated by some as equivalent to *ὀφ + φρύς* = eye + brow, *ὀφ* appearing in *ὀφ-θαλμός*. The initial vowels in *ὀμφαλός* and *ὄνυξ* are not prosthetic, for the corresponding Latin terms are *umbilicus* and *unguis*, and the Latin language is not inclined to prosthesis. From a comparison of the Skr. *nābhi* (navel) and *nakha* (a nail), it is likely that the original forms of the corresponding roots were *nābh* and *nagh*, from which in Græco-Italic times were developed the roots *ānbh* and *angh*. Prosthetic vowels are of common occurrence in the Romance languages. Thus we have in French, *épée* for *espée*, from L. *spada*, *échelle* for *eschelle*, from L. *scala*, *établir* for *establi*, from L. *stabilire*, *espérer* from L. *sperare*, *escabeau* from L. *scabellum*, *estame* from L. *stamen* ; in Spanish, *estar* = L. *stare* ; in Italian, *aringa* from G. *ring*, whence E. *harangue*. This tendency of the Romance languages to prefix initial vowels appears to have already begun in the fourth century, for on inscriptions of that date we find such forms as *istatuam*, *ispirito*, *Isticho* = *Sticho*. In Welsh, *y* is prefixed to words borrowed from the Latin which begin with *s* followed by another consonant, as in *ysgol*, *yspryd*, *ysgwyd* from L. *schola*, *spiritus*, *scutum*.

§. 52. The insertion\* of a vowel is of frequent occurrence in Greek, and is called *ἀνάπυξις*. This insertion occurs before or after *λ*, *ρ*, and the nasals, and, according to Curtius, arises from the tone, perceptibly heard in these sonants, upon which fact also rest the frequent metathesis of these sounds, and the possibility of *r* and *l* being treated as vowels in some languages. The vowels that are inserted are generally *a* and

\* Consult Curtius, "Grundzüge," p. 656 ; and Walter, in "K. Z.," vol. x., p. 428, *seq.*, vol. xii. p. 375, *seq.*, p. 401, *seq.*, on *Vocaleinschiebung* in Griechischen.

ε, less frequently ο and ι, and very seldom υ. We find a vowel inserted before or after λ, in the following cases : ὠλένη, L. *ulna* ; χάλαζα, L. *grando* ; καλύπτω = κρύπτω ; ἀλώπηξ, St. *Φαλωπεκ*, L. *vulpes* (?) ; ἀλεγεινός beside ἄλγος ; ἀλέξω and ἀρήγω beside ἀρκέω, ἄλκη, L. *arceo*, Skr. *raksh* (to protect) ; ἀλικίνος (δυνατός, Hesych.) = ἄλκιμος ; δολιχός = Skr. *dirghas* (long) ; ἡλακάτη (spindle) beside ἄρκυς (a net) ; ἤλυθον = ἦλθον (?) ; θάλασσα for παραχῶα from R. τραχ (according to Walter, however, for θλατ-γα, connected with L. *fret-um*) ; κολεκάνος (long and thin), κολοσσός (a great statue), C L. *cracentes* (graciles), L. *gracilis* ; μόλυβδος, L. *plumbum* ; μαλακός beside βλάξ (weak) ; πέλαγος beside πλήσσω, R. πλαγ (to strike), not connected with πλάξ (a plain), as πέλαγος denotes the sea in its dangerous aspect ; πέλεθρον = πλέθρον. In the case of ρ we have the following examples : ταραάσσω = παραχῶα, R. τραχ, whence the perfect τέτρηχα ; ὀρέγω, ὀρύγναι = ὀργυιά ὀριγνᾶσθαι (I stretch), R. ὀργ, Skr. *arg'* (to acquire), L. *rego* ; Æol. φέρενα = φερνή ; ἐρωδιός (a heron) L. *ardea* ; χεράς (gravel), St. χεραδ, E. *grit* ; θόρυβος beside θρυῖλος (noise) ; ὄροβος (vetches) and ἐρέβινθος (pulse), L. *ervum* ; ἀράχνη (the 'spinner') beside ἄρκυς ; Makedon. δάρυλλος for δοῦς ; ἀραβύλαι (Hesych.) = ἀρβύλαι (a kind of shoes) ; ταριχεύω (I embalm), τάριχος (a mummy, dried or salted fish), beside ταρχύω (I bury solemnly), perhaps connected with R. τερς (to dry), Skr. *tarsh* (to thirst), L. *torreo* for *tors-eo*. In the case of the nasals we have as examples, κόνις, pl. κονίδες (eggs of lice, nits), from R. *knid*, as appears from A. S. *hnit*, Lith. *glindas*, L. *lendes* ; ὄνυξ, Sl. ὄνυχ from R. *angh* ; πινυτός (wise) from R. πνυ, whence πνέω, πεπνυμένος ; σκηνίπτω = σκνίπτω (I pinch) ; ἄφενος beside ἀφνειός ; τέμαχος (a slice), beside τμήγω (I cut), from R. *τμαγ* (?) ; Τόμαρος = Τμᾶρος (a mountain in Thesprotia) ; Τυμῶλος = Τμῶλος (a mountain in Lydia). In other languages also we find vowels similarly inserted. Thus, in Zend *e* is in certain cases inserted between two consonants ; and *r* when followed by a consonant, or when

final, becomes *re*, as *dademahi* (we give) = Skr. *dadmasi*, *da-  
dares'a* (1 sing. perf.) = Skr. *dadars'a* = δέδορκαί, *dátare* (voc.  
sing.) from St. *dátar*. In O. H. G. we have *puruc* = Goth.  
*baurgs*, *furuh* = L. *porcus*, *araweiz* = L. *ervum*. In Latin, we  
have *Æsculapius* = Ἀσκληπιός, *Procina* = Πρόκνη, *Alcumenu*  
= Ἀλκμήνη, *sumus* from *esumus* = I. E. *asmas*. In Oscan a  
vowel is frequently inserted, as *Alufaternom* = L. *Alfaterno-  
rum*, *arageñud* = L. *argento*, *sakarater* = L. *sacratum*.

### §. 53. THE GUTTURALS.

K = I. E. *k*: καλός, καλλύνω (I make clean), Skr. *kalyu*  
(healthy), E. *heal*, *hale*; κάρυον (a nut), Skr. *karaka* (cocoa  
nut), L. *carina* (a shell, keel); καρκίνος (a crab), Skr. *karka*  
(a crab), L. *cancer*; κείω, κέαζω, R. σκε or σκα, Skr. *k'hû* (to  
divide), L. *descisco*, *scio*; λύκος = Skr. *vṛkas* (a wolf); δείκ-  
νυμι, R. δικ, Skr. *dis'* (to show), L. *dico*; δέκα = Skr. and Z.  
*das'an* (ten), L. *decem*; ἑκατον for ἐν-κατον, Skr. *s'atam* (an  
hundred), L. *centum*.

Γ = I. E. *g*: γῆρυς, Skr. *gar* (to call), L. *garrus*; ἐγείρω,  
Skr. *gar* (to awake); στέγω, Skr. *sthaḡ* (to cover), L. *tego*;  
ἀγρός = Skr. *ag'ras* (a level plain), L. *ager*; ἀργής (bright),  
ἄργυρος, ἄργιλος (white clay), Skr. *arguna* (bright), *rag'atu*  
(silver), L. *arguo* (I make clear), *argentum*. Γ is found for  
an I. E. *k* in ἀρήγω from R. ἀρκ; τήγανον (a frying pan) from  
τήκω; μίσγω, R. μιγ, beside Skr. *mis'ra* (mixed), L. *misceo*;  
λύγη (gloom) beside R. λυκ (λευκός, &c.); πηγός (firm),  
πήγνυμι, beside L. *pac-iscor*, Skr. *pas'* (to bind); ἄρπαξ, St.  
ἀρπαγ = L. *rapax*, St. *rapac*; κραυγή, beside Skr. *krûs'a* (a  
cry); ἐφράγην beside φράσσω = φρακ-γω = L. *farcio*; μαγεύς  
(one who kneads) beside μάσσω = μακγω, L. *macerare*; πληγή  
beside πλήσσω = πληκγω, Lith. *plàkti* (to beat). We find a  
tenuis weakened to a media in It. *luogo*, from L. *locum*, It.  
*padre* from L. *patrem*, Fr. *abeille* from L. *apiculam*, &c. Γ is  
lost in αἶα = γαῖα, ὄρος = Skr. *giri* (a mountain), Bœot. *ιών*

= ἔγων, Tarentine ὀλίος = ὀλίγος, Φιαλία = Φιγαλία (an Arcadian city). In the following cases, in which  $\gamma$  corresponds to a Sanskrit  $h$  or  $gh$ , either each root existed in two forms, one with  $g$ , and another with  $gh$ , in the Indo-European, or else the I. E. form had  $g$  only, from which by aspiration  $gh$  was developed in Sanskrit, and this  $gh$  became  $h$ : γένυς = Skr. *hanus* (the chin), L. *gena*, Goth. *kinnus*; γε, Skr. *ha*, Ved. *gha*, Goth. *k* in *mi-k*, O. II. G. *h* in *unsi-h*; μέγας, μέγας = Goth. *mikils*, Skr. *mahat* (great), L. *magnus*; ἔγων = Skr. *aham*, Goth. *ik*. In these cases the Gothic *k* points back to an I. E.  $g$ . In the following examples  $\gamma$  = I. E.  $gh$ ; ἔγγυς, Skr. *anhu* (narrow), Goth. *aggeus* (narrow), the original  $gh$  being still retained in ἄγχι; θυγάτηρ = Skr. *duhitā*; and perhaps in λαγώς (a hare) beside Skr. *lañgh* (to jump).

X = I. E.  $gh$ : δολιχός = Skr. *dīrghas* (long); ἐλαχός = Skr. *laghus* (light); στείχω, Skr. *stigh* (to ascend), Goth. *steiga* (I go up); χρίω, χρίσμα, Skr. *ghar* (to sprinkle), *gharsh* (to rub), *ghṛta* (clarified butter); χοῖρος, Skr. *ghṛshti* (a pig), O. N. *grís* (a little pig). X, θ, and φ, frequently represent an I. E.  $k$ ,  $t$ , and  $p$ , as we shall see in §. 63, on Aspiration.

The spiritus asper represents a Græco-Italic initial  $y$ ,  $v$ , and  $s$ . It is =  $y$  in ἦπαρ, Skr. *yakṛt*, L. *jecur*; ὥρα, Z. *yáre* (a year), E. *year*; ὅς = Skr. *yas* (who). It is =  $v^*$  in ἔσπερος, L. *vesper*; ἔννυμι = Fεσ-νυμι, Skr. *vas* (to clothe). It is =  $s$  in ὁ, ἡ, = Skr. *sa* (he), *sā* (she), O. L. acc. *sum*, *sam*; ἄ in ἄ-παξ = *sa* in Skr. *sa-kṛt* (once), L. *simplex*; ἐ = L. *se*; ῥέω, R. ῥυ for σρυ, Skr. *sru* (to flow); ῥοφέω, L. *sordeo*. In εἰπόμεν (for ἐσεπομην, R. σεπ), εἰστήκειν (for ἐσεστηκειν, R. στα), the initial aspirate perhaps arose from the  $\sigma$  lost in the second syllable. Sometimes the original initial  $\sigma$  is retained beside the younger aspirate, as in σῦς = ὕς, Ἑλλοί = Σελλοί. The spiritus asper

\* Similarly in Spanish we have *hijo* = L. *filius*, *heno* = L. *fenum*, *herir* = L. *ferire*, *hacer* = L. *facere*.

is preserved between two vowels in  $\tau\alpha\omega\varsigma$  = L. *pavo*, and in Laconian  $\epsilon\pi\omicron\iota\epsilon\acute{\epsilon}$  for  $\epsilon\pi\omicron\iota\eta\sigma\epsilon$ . In  $\rho\acute{\iota}\nu$  beside Skr. *ghṛana* (the nose), the sp. asp. represents *gh*. In Attic an initial sp. asp. is frequently added where it does not exist in the other dialects. Hence the Athenians were called  $\delta\alpha\sigma\upsilon\nu\tau\iota\kappa\omicron\iota$  in opposition to the Æolians, who were called  $\psi\iota\lambda\omega\tau\iota\kappa\omicron\iota$ , from their aversion to this sound. Thus we have  $\eta\pi\pi\omicron\varsigma$  beside Lesb.  $\eta\pi\pi\iota\omicron\varsigma$ , Tarent.  $\eta\kappa\kappa\omicron\varsigma$ , Sikil.  $\iota\pi\nu\acute{\eta}$  ( $\epsilon\phi\iota\pi\pi\acute{\iota}\varsigma$ ), and the common forms  $\Delta\epsilon\acute{\upsilon}\kappa\iota\pi\pi\omicron\varsigma$ ,  $\Gamma\lambda\alpha\acute{\upsilon}\kappa\iota\pi\pi\omicron\varsigma$ , L. *equus* = Skr. *as'vas* :  $\eta\lambda\iota\omicron\varsigma$  = Ep.  $\eta\acute{\epsilon}\lambda\iota\omicron\varsigma$  ;  $\eta\mu\epsilon\acute{\iota}\varsigma$  = Æol.  $\alpha\mu\mu\epsilon\varsigma$ , Skr. *asmān* ;  $\eta\gamma\epsilon\acute{\iota}\sigma\theta\alpha\iota$  beside  $\alpha\gamma\omega$  ;  $\acute{\epsilon}\omega\varsigma$  = Ep.  $\eta\acute{\omega}\varsigma$ , Æol.  $\alpha\upsilon\omega\varsigma$ . We also find the Heraklean  $\omicron\kappa\tau\acute{\omega}$ ,  $\acute{\epsilon}\nu\eta\acute{\epsilon}\alpha$ , perhaps from the analogy of  $\xi\acute{\xi}$ ,  $\acute{\epsilon}\pi\tau\acute{\alpha}$ . Initial  $\upsilon$  in Attic always is aspirated, as in  $\acute{\upsilon}\pi\acute{\omicron}$ , Skr. *upa* (near) ;  $\acute{\upsilon}\pi\acute{\epsilon}\rho$ , Skr. *upari* (above) ;  $\acute{\upsilon}\delta\omega\rho$ , Skr. *udan* (water) ;  $\acute{\upsilon}\sigma\tau\epsilon\rho\omicron\varsigma$  = Skr. *uttaras* (later). Similarly we find *h* prefixed in L. *humerus* for *umerus*, *humor* for *umor*, Span. *hedrar* = L. *iterare*, Fr. *haut* = L. *altus*.

The spiritus asper was frequently changed into the lenis, as in Ep.  $\eta\delta\omicron\varsigma$  beside  $\eta\delta\acute{\upsilon}\varsigma$  ; Ep.  $\omicron\upsilon\lambda\omicron\varsigma$  beside  $\omicron\lambda\omicron\varsigma$  ;  $\epsilon\delta\alpha\phi\omicron\varsigma$  and  $\omicron\upsilon\delta\alpha\varsigma$  beside  $\omicron\delta\acute{\omicron}\varsigma$ , R.  $\acute{\epsilon}\delta$  = Skr. *sad* (to go) ;  $\alpha\omega$  (I satiate) only found in inf. pres.  $\alpha\mu\epsilon\nu\alpha\iota$  and  $\alpha\delta\delta\eta\nu$  beside  $\alpha\delta\eta\nu$ , and L. *satis*, *satur* ;  $\epsilon\pi\rho\iota\nu\nu\acute{\varsigma}$  = Skr. *Saranyūs* ;  $\epsilon\acute{\iota}\rho\omega$  (I join), beside  $\sigma\epsilon\iota\rho\acute{\alpha}$ ,  $\theta\rho\omicron\mu\omicron\varsigma$ , and L. *sero* ;  $\epsilon\tau\epsilon\acute{\omicron}\varsigma$  = Skr. *satyas* (true) ;  $\omicron\pi\acute{\omicron}\varsigma$  beside L. *sucus* ;  $\omicron\rho\acute{\omicron}\varsigma$  beside L. *serum* ;  $\acute{\alpha}$  (in  $\alpha\lambda\omicron\chi\omicron\varsigma$  &c.), for  $\acute{\alpha}$  = Skr. *sa* ;  $\eta\theta\omega$  =  $\sigma\acute{\eta}\theta\omega$  (I sift) ;  $\iota\delta\acute{\iota}\omega$  (I sweat) ; beside  $\iota\delta\rho\acute{\omega}\varsigma$  ;  $\iota\delta\iota\omicron\varsigma$  beside  $\acute{\epsilon}$  =  $\sigma\text{Fe}$  ;  $\theta\phi\rho\alpha$  from pronominal stem  $\acute{\omicron}$  = Skr. *ya*. In Ionic we also see a tendency to weaken the spiritus asper in the fact that after elision a preceding tenuis was not aspirated by a following aspirate, as in  $\acute{\alpha}\pi' \omicron\upsilon$ ,  $\kappa\acute{\alpha}\rho\omicron\delta\omicron\varsigma$ . In Æolic the initial aspirate was kept, according to Ahrens, whenever it represented an original *s* or *y*, except in  $\eta\mu\mu\epsilon\varsigma$  beside Skr. *yushman*, and  $\kappa\alpha\tau\iota\delta\rho\acute{\upsilon}\sigma\epsilon\iota$  beside L. *sedeo*, Goth. *sita* (I sit), but it was lost whenever it had arisen from any other cause. Thus we find the aspirate kept in  $\alpha\gamma\nu\omicron\varsigma$  beside Skr. *yag'* (venerari),  $\omicron\delta\acute{\omicron}\varsigma$  in  $\epsilon\phi\omicron\delta\omicron\varsigma$  beside Skr. *sad* (to

go), &c. ; and it is absent in ἄμμες beside ἡμεῖς and Skr. *asmān*, ἱρος = ἱερός, ἰπέρ = ὑπέρ, ἱψος = ὕψος, &c. This view of the case does not appear to be exactly correct ; for we find in Alkæus καθύπερθεν, πρώτισθ' ὑπό, where the aspiration before *υ* is retained, though it is not original, as we see from the Skr. forms *upari* and *upa* ; and moreover in ἄδυσ = Skr. *svadus*, and Ὑρράδῃω (Alk. 73), beside L. *spurius*, the aspiration is lost, though the words originally began with *sv*.<sup>1</sup> This tendency of the Æolic to ψίλωσις refutes the old-fashioned idea that Latin was closely connected with it, for the sibilant is retained in Latin, from which the aspiration in Greek was developed. The spiritus asper is entirely lost in Modern Greek.

### §. 51. THE DENTALS.

T = I. E. *t* : ἀντί, Skr. *anti* (before) ; πέτομαι, R. πετ, Skr. *pat* (to fly) ; στένω, R. στεν, Skr. *stan* (to groan) ; σόρνυμι. Skr. *star* (to strew) ; τείνω, R. तेन or तαν, Skr. *tun* (to stretch) ; &c.

T = I. E. *kv* : τίς = L. *quis* = Osc. *pis*, Skr. *him* (quid), Z. *k'ish'a* (quisquis), Osc. *pīpīt* = L. *quidquid* ; τέ = L. *que*, Skr. *k'a*, Goth. *h* in *nih* = L. *neque* ; πέντε = L. *quinque*, Æol. πέμπε ; ἄλλοτε = Dor. ἄλλοκα ; ταῶς = L. *pavo*. T appears to correspond to *k* in τίω (I honour), τίνω (I punish), Skr. *k'i* (to distribute), Z. *k'i* (to punish), and in ἀκίναγμός = τίναγμος (κίνησις). Here *k* became *t*, through the stages *ky* and *ty*. In Latin, *c* and *t* are frequently interchanged before *i* as in *patricius* = *patritius*, *Mucius* = *Mutius*.

Δ = I. E. *d* : δαμάω, R. δαμ, Skr. *dam* (to tame), L. *domare*, Goth. *ga-tamjan* (δαμᾶν), O. H. G. *zamōn* (to tame) ; δρῦς = Skr. *drus*, Goth. *triu* (tree) ; ἔδω, R. ἐδ, Skr. *ad* (to eat), L. *edo*, Goth. *īta* (I eat) ; ἕζομαι, R. ἐδ, Skr. *sad* (to sit), L. *sedeo*, Goth. *sita* (I sit) ; &c.

Δ = I. E. *t* : δάπις (a carpet), beside τάπης and ταπίς ; Ἄρτεμις, Ἀρτέμιδ-ος, beside Dor. Ἀρτάμιρος, whence Ἀρα-

μίτιος (name of a Spartan month), and Ἀρταμίτιον; θέμις, θέμιδ-ος beside θέμιτος, in Pindar; ἔβδομος from ἑπτα; ὄγδοος from ὄκτω; νέποδες (= ἀπόγονοι in Alexandrian Poets), beside L. *nepotes*.

Δ = I. E. *dh* in πύνδαξ (the bottom) beside πυθμήν, Skr. *budhna* (the bottom), I. E. *bhuidh* being the root; and perhaps in ἀλδαίνω (I increase) beside ἀλθαίνω (I heal) and Skr. *ardh* (to increase).

Δ = I. E. *g*: δελφύς (the womb) = Skr. *garbhas* (the womb); Lakon. διφούρα = γέφυρα; Δημήτηρ = Γη-μητηρ. Conversely we find γλυκύς for δλυκς, L. *dulcis*, and γνόφος for and beside δνόφος. We also find δ for β in Dor. ὀδελός = ὀβελός, and Kret. ὀδολκαί = ὀβυλοί.

Θ = I. E. *dh*: ἄνθος, Skr. *andhas* (plant), L. *ador*; θῆσθαι (Hom. to milk), θῆλυς, R. θα, θη, Skr. *dhi* (to drink), *dhenu* (a cow), L. *filius*, *femina*, *felare* (to suck); θρασύς, Skr. *dharsh* (to dare), Goth. *ga-daur-san* (θαρρείν); θυγάτηρ, I. E. *dhughatar*, Skr. *duhitar*, Goth. *dauhtar*; θύρα, Skr. *dhvāra* (door) L. *fores*, Goth. *daur* (door); &c.

Θ = I. E. *gh* in θερμός, R. θερ, Skr. *gharma* (heat), L. *formus* (hot), *fornax*, *forceps*, Goth. *varmjān* (θάλπειν). We find θ and χ interchanged in ὄρνιθος = Bæot. ὄρνιχος, Mod. Gr. Λιθαδό-νησα = Λιχάδες, and ἥρχα beside ἤλθον, unless it be derived from ἔρχομαι. This change is not easily accounted for: it has been suggested that θ developed a hard aspirate after it, before which it afterwards fell out, and that this aspirate afterwards developed χ before it, and then fell out. This explanation is, however, very improbable. We also find θ interchanged with φ in Kret. ὄθρυς (a mountain) = ὄφρύς (brow of a hill), ὄθρυνόεν (κρημνῶδες), Ὀθρυνάδας (superciliosus); θύλλα (κλάδους ἢ φύλλα ἢ ἱορτι) Ἀφροδίτης, Hesych.) = φύλλα; and perhaps in θυλλίς, θαλλίς, θύλακος, all meaning a *bag*, if these words are connected with Goth. *balgs* (a bag).

P = I. E. *r*: εὐρύς = Skr. *urus* (wide), from I. E. *varus*;

οὐρανός = Skr. *Varunas* (the god of the water); ὄρος, Skr. *giri* (a mountain), Ch. Sl. *gora* (a mountain); ὄρνυμι, R. ὄρ, Skr. *ar* (to move), L. *orior*; ῥέω, R. ῥυ, σρυ, Skr. *sru* (to flow); σῦριγξ, Skr. *svaṛ* (to sound), &c.

P is lost in ποτί = προτί, πρόσ. Προτί became πορτί, which is found in the Kretan dialect, and then ποτί: similarly we have φρέατος, ὕδατος, σκατός for φρεαρτος, ὕδαρτος, σκαρτος, L. *pedo* = πέρδω, &c. Leo Meyer asserts that ρ<sup>ε</sup> is lost in περάννυμι beside Skr. *prath* (to extend), and φέγγος beside Skr. *bhrág'* (to shine): but περάννυμι is connected with L. *pateo*, *pando*, O. H. G. *fadam* (filum), E. *fathom*, and *prath* is found in πλατύς; *bhrág'* is connected with φλέγω, L. *fulgeo*, *flagro*, Goth. *bairhts* (δῆλος), and, according to Curtius, φέγγος (for φεγγος) is related to φάφος (Æol. φαῦος, Pamphyl. φάβος), exactly as βένθος is to βάθος.

The Laconians frequently changed σ, especially when final, into ρ: thus they used ἀκκόρ, πίσσορ, σιόρ, ἀβώρ, πόρ, βίωρ, μιργάβωρ, &c. for ἀσκόρ, πίθος, θεός, ἡώς, ποῦς, ἴσως, μισγής, &c. The only other example of the same change in any other Doric dialect is the Kret. τεόρ (σοῦ) for τέος. This change is also found in a few cases in the Æolic dialects of Elis and Eretria. In no case does σ appear to have been changed into ρ, when it comes between two vowels: thus we find in the Elean treaty τοῖρ Φαληῖοις, but τοῖς Ἑρ Φαφίοις.

Initial ρ is always aspirated, except in ῥάριον πεδίον and ῥάρος (a child untimely born).

Λ = I. E. *r*: ἄλλομαι, R. ἄλ, Skr. *sar* (to go); ἄλς, Skr. *sara* (salt); βούλομαι, Skr. and Z. *var* (to choose); ὅλος = Skr. *sarvas* (all), O. L. *sollus* (all), &c.

Λ = I. E. *l*: see §. 21.

Λ represents an older ν in λίτρον beside νίτρον, from Heb. *neter*; πλεῦμων beside πνεύμων; σκολόπαξ (a large bird, of snipe kind), beside G. *schneepfe*, E. *snipe*; and perhaps in ἄλλος = Skr. *anyas* (alius). Conversely the Dorians often changed λ before τ and θ into ν, as in βέντιστος, φέντατος, ἡνθεν, &c.

We find *n* and *l* interchanged in other languages, as in Skr. *skandha* (shoulder), Med. L. *spalda*, E. *shoulder*; Skr. *kanyā* (a girl), Ir. *caile* (a woman); *κονίδες* (eggs of lice, nits), L. *lendes*, Lith. *glindas*; It. *Bologna* = *Bononia*, *veleno* = L. *venenum*; Prov. *namela* (a blade) = L. *lamella*.

Λ is vocalized in Kret. *ἀυκάν*, *αὔμα*, *αὐγεῖν*, &c., for *ἀλκάν*, *ἄλμη*, *ἀλγεῖν*, &c., as in E. *talk*, *calm*, and Umbr. *muta*, *vutu* for *multa*, *vultum*.

Σ = I. E. *s*: R. *ἐς*, *εἰμί* (Æol. *ἔμμι*) = *ἔσμι* = Skr. *asmi* (I am), *ἐστί* = Skr. *asti* (he is), L. *sum*, *est*, Lith. *esmi*, *esti*, Goth. *im*, *ist*; R. *ἐς* from *ἔς*, *ἐννυμι* for *ἔς-νυμι*, *ἐσθής*, Skr. *vas* (to clothe), L. *vestis*; R. *ἦς*, *ἦσται* = Skr. *ásté*; *ἴσος*, Skr. *viśhu* (æque); R. *συ*, *κασσύω* (from *κατά* and *σύω*), Skr. *siv* (to sow), L. *suo*, Goth. *siu-ja* (*ἐπιρράπτω*).

Σ is generally omitted between two vowels, as in *μένους* for *μενεσος* = Skr. *manasas* (gen. sing.); *φέρη* for *φερεσαι*; *Φιός* (poison), = Skr. and Z. *viśhas* (poison), L. *virus*; &c. Σ in these cases probably first became the spiritus asper, and then fell out. Σ is, however, frequently retained, especially when it represents an original *t*, as in *φησί*, Dor. *φατί*; *ἐνιαύσιος*. Dor. *ἐνιαύτιος*, from *ἐνιαυτός*; *πλούσιος*, Dor. *πλόντιος*, from *πλοῦτος*; *πλησίος* beside *ἄπλητος*, Dor. *πλατίος*; *διακόσιοι*, Dor. *διακάτιοι*; *εἴκοσι*, Dor. *Φείκατι*; *πέρυσσι*, Dor. *πέρυτι*, Skr. *parut*; *ἔπεσον*, Dor. *ἔπετον*, from *πίπτω* = *πι-πετω*; *Ποσειδῶν*, Dor. *Ποτειδάν*.

The Laconians generally changed *θ* into *σ*: in the *Lysistrata* of Aristophanes we find such forms as *σέλει*, *σέτω*, *ἀγασός*, *σιός* (*θεός*), *Ἀσάνα*, &c., and yet in other cases, without any apparent reason, *θ* is retained, as in *θείκελοι*, &c.; in Thucydides, in the Lakonian decree (v. 77), we find *τῷ σιῷ σύματος* for *τοῦ θεοῦ θύματος*, &c. In every case they used *σ* for *θ*, except where the law of euphony would be violated by the change; as in *θίασος*, on account of the following *σ*; *ἔσθος*, not *ἔσπος*; *ἄθροος* not *ἄσρουος*, as no Greek used the conjunction of *σρ*, &c. This change did not set in till late;

for we find that it was unknown to the Spartan Colonists who founded Tarentum and Heraklea. The Dorians once possessed another sibilant, which they called San, and of which traces are found in the double  $\sigma$  in such Dorian forms as Ἀρισστό-δαμος.

N = I. E.  $n$ : R. *ān*, *άνεμος*, Skr. *an* (to breathe), *anila* (wind), L. *animus*, *anus*; *άνήρ*, Skr. *nara* (a man), Sabin. *nero* (brave); *έννέα*, Skr. and Z. *navan* (nine); R. *μεν, μαν, μένος, μῆνις*, Μέντωρ, *μνήμη*, Skr. and Z. *man* (to think), L. *maneo*, *memini*, *moneo*, Goth. *muns* (νόημα), O. H. G. *minna* (love); \* *ναῦς* = Skr. *nāus* (a ship); L. *navis*, &c.

N = I. E.  $n$ : *ἔφερον* = Skr. *abharani*; *ποδῶν* = Skr. *padām*, L. *pedum*; *ἐφέρετον* = *abharatam*; *τόν* = Skr. *tam*, L. *istum*; *τάων* (*τῶν*) = Skr. *tāsām*, L. *istarum*; and similar terminations. Curtius also compares *ήνία* (the reins), with Skr. *yam* (to bind); R. *θαν*, *ἔθανον*, with Skr. *dham* (to blow); *βαίνω* = *βαν-γω*, with Skr. *gam*; *κύανος* (dark blue steel), with Skr. *s'yāma* (dark); *χθών* with *χαμάι*, L. *humus*; *χίων* with Skr. *him* (frost), *hima* (snow), L. *hiems*. These are, however, doubtful cases; and it is quite possible that  $\nu$  may have originally been part of the pronominal suffix *na*, as is certainly the case with *βαίνω*, the root of which is *βα* = Skr. *gá* (to go).

## §. 55. THE LABIALS.

Π = I. E.  $p$ : *ἀπό*, Skr. *apa* (away) Z. *apa* (from) L. *ab*; *ἐπί*, Skr. *api* (to), Z. *aipi* (after); *ἑπτά* = Skr. *saptan*, Z. *hap-tan*; R. *λιπ*, *λίπα* (oil), Skr. *lip* (to anoint), &c.

Whenever  $\pi$  corresponds to a Skr. *k*, *k'*, *s'*, either the original sound must have been *kv*, or, if *k* was the original sound, it must have passed through the stage *kv* in becoming  $\pi$ . Thus we have *ἵππος* = Skr. *as'vas*, L. *equus*, O. S. *ehu*; R. *ἐπ*, *ἐπομαι*, Skr. *sak'* (to follow), L. *sequor*; R. *λιπ*, *λείπω*, Skr. *rik'* (to leave), L. *linguo*; *πεντε*, Skr. *pañk'an*, L. *quinque*; R. *πεπ*, *πέπτω*, Skr. *pak'* (to cook), L. *coquo*; *ποῦ*, *πῶς*, Ion. *κοῦ*, *κῶς*,

Skr. *ka* (who), *kva* (where), L. *quis*, Goth. *hvas* (who); in all which cases the I. E. forms had *kv*, where the Greek has π. Σπ and σκ are interchanged in some cases; thus we have σπάλαξ (a mole) = σκάλοψ, σπάλαθρον (a poker) = σκάλευθρον; similarly we have σπινθήρ beside L. *scintilla*, Goth. *skeinan*; σκῦλον, L. *spolia*; R. σκεπ, σκέπτομαι, L. *specio*; R. σφαλ, σφάλλω; Skr. *sphal* and *skhal* (to totter). Σπ and στ are also interchanged: στάδιον, Æol. σπάδιον, L. *spatium*; Æol. σπόλα for στολή; similarly we have σπεύδω beside L. *studeo* and στροῦθος beside Goth. *sparva*, E. *sparrow*.

Π appears to represent an I. E. *bh* in the two following cases: R. πι, πω, πίνω, Æol. πώνω, Skr. *pí*, *pá*, *pibámi* (I drink), where we find a trace of the I. E. *bh* in *b*, L. *potus*, *bibo*, E. *beer*; πνός (beestings), Skr. *pīyusha* (beestings), O. H. G. *biost*, N. H. G. *biest*, E. *beestings*.

B = I. E. *b*: see §. 22.

B = I. E. *bh*: βρέμβος\* (ἐμβρονον, Hesych.) beside βρέφος; θάμβος which is related to Hom. τάφος as βένθος to βάθος; φέβομαι for φεβιομαι, a reduplication of R. φι = Skr. *bhí*, *bi-bhēmi* (I fear); βρεχμός (the top of the head), A. S. *bregen* (the brain), which Grassman connects with φράσσω (R. φραγ) = Goth. *bairga* (R. *barg*), just as Goth. *hwairnei* (the skull), is derived from a root signifying *to cover*; βρέμω, Skr. *bhram* (to whirl),\* L. *fremo*, O. N. *brim* (the surge), φόρμιγξ may be derived from this root, as βρέμεσθαι is used of the lyre in Pindar (Nem. xi. 7); θρόμβος (a clot of blood), beside τρέφω (to curdle), τροφαλῖς (fresh cheese); κόρυμβος (the top), beside κορυφή; κράμβος (dry) beside κάρφω (to dry); κύμβος (a cup) = Skr. *kumbhas* (a jug); ὄμβρος beside Skr. *ambhas* (water); στέμβω, στιβαρός beside ἀστεμφής (unmoved), στίφος, Skr. *stambh* (to prop); στρόμβος (a whirlwind, a top), beside στρέφω; βλύω = φλύω (to bubble); λαμβάνω, R. λαβ,

\* Max Muller (ii. p. 217), opposes this view, and connects Skr. *bhram* with Gr. φρίμασσειν.

beside εἰ-ληφ-α, Skr. *labh* (to seize). In addition to these examples, Grassman ("K. Z.," vol. xii., pp. 91, 93), adduces ὄβριμος beside Skr. *ambhr̥na* (powerful), βασκαίνω beside L. *fascino*, and βαζω (I speak), beside φήμη, R. φη, Skr. *bhā*, but ὄβριμος is rather connected with R. βρι, βριθω, and the other two cases are extremely doubtful.

B = I. E. *v*: βούλομαι, Skr. *var* (to choose), L. *volo*; βλάστη (a shoot), Skr. *var̥dh* (to grow). Similarly we find Lakon. βέργον, βιδεῖν, βείκατι for Φέργον, Φιδεῖν, Φείκοσι; here, however, β may have been pronounced as F.

B = I. E. *p*: ἀβρός (luxurious), beside ἀπαλός (tender, perhaps connected with L. *sapor*; Ἀμβρακία beside the older Ἀμπρακία, π becoming β on account of the preceding μ, just as in Modern Greek μπ is written for the sound of the old β; ἱαμβος beside ἱαπτω; καλύβη (a hut), beside καλύπτω, L. *clupeus*; καρβατίνη (a shoe) = καρπατίνη; κέβλη and κεβάλη (the head), κυβιστάω (I jump headlong), beside Skr. *karāla* (the skull), κεφαλή, and κύπρος (κεφάλαιον ἀριθμοῦ); κεκλεβώς (found on an inscription of Andania) = κεκλοφώς, from R. κλεπ; κομβακένετα (κόμπους λέγει, Hesych.) and κρέμβαλον (a clapper) beside L. *crepare*, owe their βς to the influence of μ; λεβηρίς (a skin) and λοβός (a pod) beside λέπω; στίλβω beside στιλπνός (glittering), perhaps connected with στεροπή, ἀστράπτω; στοιβή (stuffing) beside στύπος, Skr. *stupa* (a heap), L. *stipa*, *stupa*; ὕβρις from ὑπέρ; βατεῖν and βικρός were used at Delphi for πατεῖν and πικρός; βόσκω is connected with L. *pasco* by Leo Meyer, but this comparison is very doubtful, as there are no analogous cases save the last-mentioned Delphic forms. In the Kret. ἀβλοπές for ἀβλαβές, π appears to represent an older β; but Curtius suggests that π may be original, and that the root is not βλαβ, but βλαπ for μλαπ, a causative formed from μλα = Skr. *mlā* (to fade), which is the root of μαλακός, βλάξ.

Whenever β corresponds to a Skr. *g* or *g'*, either the original sound was *gv*, or, if *g* was the original sound, it must

have passed through the stage *gv* in becoming  $\beta$ . Thus we have R.  $\beta a$ , Skr. *gá* (to go), *agám* = ἄγην, Lat. *vetere*, *venio*, Osc. *ben* (to come), Goth. *quinnan* (to come); R.  $\beta a\lambda$ ,  $\beta á\lambda\lambda\omega$ , Skr. *gal* (to drop), O. H. G. *quillu*, (scaturio);  $\beta a\rho\acute{u}\varsigma$  = Skr. *gurus* = Goth. *kaurs*;  $\beta ía$ , Skr. *g'í* (to conquer);  $\beta ío\varsigma$ , Skr. *g'ív* (to live), L. *vivo*, E. *quick*;  $\beta oí\eta$ ,  $\gamma óo\varsigma$ , Skr. *gu* (to sound), L. *boere*, *bovare*; R.  $\beta o\rho$ ,  $\beta o\rho á$ , Skr. *gar* (to devour), L. *vorare*;  $\beta o\acute{u}\varsigma$  = Skr. *gáus*; Bæot.  $\beta a\nu á$  =  $\gamma u\nu\eta$ ;  $\pi\rho é\sigma\beta u\varsigma$  = Kret.  $\pi\rho é\tau\gamma u\varsigma$ , Dor.  $\pi\rho é\sigma\gamma u\varsigma$ , from  $\pi\rho e\varsigma$  (L. *pris* in *pris-cus*, *pristinus*) =  $\pi á\rho o\varsigma$  = Skr. *puras* (before), and R.  $\gamma u$  =  $\gamma a$ ,  $\gamma e\nu$ , from which also comes  $\Pi e\lambda a\sigma\gamma oí$  (the ancients);  $\xi\rho e\beta o\varsigma$  beside Skr. *raǵas* (darkness), Goth. *riquis* (darkness);  $\tau á\rho\beta o\varsigma$  beside Skr. *targ'* (to threaten). When  $\beta$  represents an older *gv* we occasionally find instead of it the dialectic variety  $\zeta$ , as in Arkad.  $\epsilon\pi i\zeta a\rho e\acute{\iota}\nu$  =  $\epsilon\pi i\beta a\rho e\acute{\iota}\nu$ , Arkad.  $\zeta í\rho e\theta\rho o\nu$  =  $\beta á\rho a\theta\rho o\nu$ , from same root as  $\beta o\rho á$ , Skr. *gar* (to devour), L. *vorare*; Arkad.  $\zeta é\lambda\lambda\omega$  =  $\beta á\lambda\lambda\omega$ ; Hom.  $\pi e\phi u\zeta ó\tau e\varsigma$  =  $\pi e\phi u\gamma\phi o\tau e\varsigma$ . We find  $\beta$  for  $\delta$  in Thess.  $B\omega\delta \acute{o}\nu$  =  $\Delta\omega\delta \acute{o}\nu\eta$  for  $\Delta\phi\omega\delta\omega\nu\eta$  from R.  $\delta i\phi$ , Skr. *div* (to shine), whence come  $\zeta e\acute{u}\varsigma$ ,  $\delta ío\varsigma$ ,  $\delta \eta\lambda o\varsigma$ , L. *divus*, as L. *bis* and *bonus* arise from *duis* and *duonus*; Æol.  $\beta e\lambda\phi í\varsigma$  =  $\delta e\lambda\phi í\varsigma$ , connected with Skr. *grah* for *grabh* (concupere), Skr. *garbhas* (nom. sing. masc. a child), Z. *garewa* (foetus), Gr.  $\beta\rho é\phi o\varsigma$ ,  $\delta e\lambda\phi \acute{u}\varsigma$ ,  $\delta o\lambda\phi \acute{o}\varsigma$  (ἡ μήτρα, Hesych.),  $\delta e\lambda\phi í\varsigma$  thus meaning "the fish with the belly;"\* Æol.  $B e\lambda\phi oí$  =  $\Delta e\lambda\phi oí$ , from last root, and perhaps so called from its position in a deep ravine;† Æol.  $\sigma á\mu\beta a\lambda o\nu$  =  $\sigma á\nu\delta a\lambda o\nu$ , borrowed from Pers. *sandal* (a shoe);‡ Æol.  $\beta\lambda \eta\rho$  =  $\delta é\lambda e a\rho$ , connected with  $\delta ó\lambda o\varsigma$ , L. *dolus*, O. N. *tál* (fraud). We have also Dor.  $\acute{o}\delta e\lambda \acute{o}\varsigma$  =  $\acute{o}\beta e\lambda \acute{o}\varsigma$ , where  $\delta$  and  $\beta$  represent an original *gv*, if this word belong to the same root as  $\beta é\lambda o\varsigma$ ,  $\beta e\lambda \acute{o}\nu\eta$ ,  $\beta á\lambda\lambda\omega$ , Skr. *gal* (to fall).

\* Or  $\delta e\lambda\phi í\varsigma$  may be the "voracious fish," as Skr. *grah* means "to seize."

† Curtius, "Grundzüge," p. 420.      ‡ Ibid. p. 425.

Φ = I. E. *bh*: R. φερ, φέρω, Skr. *bhar* (to bear), L. *fero*, Goth. *bairai* (φέρω); φράτηρ (member of a φρατρία), Skr. *bhrātā* (nom. sing. brother), L. *frater*, Goth. *bróthar*; R. φυ, φύω, Skr. *bhū* (to be), L. *fuī*; R. φαρ, φάρος (a plough), φάρ-αγξ (a ravine), Z. *bar* (to bore), L. *forare*. In νίφα (acc. snow), φ represents an I. E. *ghv*, L. *ningu-it*, *nix*, St. *niv* for *nign*. We find φ and χ interchanged in φλιαρός beside χλιαρός (Hesych.), Æol. αὔφην = αὐχίν, δάφνη = Thess. δαύχνη, where χ is perhaps original. if the root be Skr. *dah* for *dagh* (to burn).<sup>\*</sup> Similarly in Latin we find *f* = I. E. *gh* in *fri-are* = χρί-ειν, &c.

Φ sometimes takes the place of θ, especially in the Æolic dialect; thus we have Æol. φρόνος = θρόνος in ποικιλόφρον' (Sappho I. 1)†; Æol. φήρ = θήρ; Æol. φοίνα = θοίνη (a feast); φαρυμός (bold, Hesych.), beside θρασύς with ρ for θρ, ρς; φλάω, φλίβω beside θλάω, θλίβω (I crush); κόφινος beside Skr. *kathina* (vas fictile). Similarly L. *f* = I. E. *dh*, in L. *fera*, Gr. θήρ, L. *fumus* = Skr. *dhūmas* (smoke); L. *famulus*, Skr. *dhūman* (a house), Gr. τίθημι, R. θε, Skr. *dhā* (to place). Grassmann suggests that in such cases the initial sound originally was *dhv*; but, though this in some cases may be true, it is very unlikely that it is so in all. We can explain the interchange of *f* and *dh* much more easily; for we know that if, in pronouncing *dh* or *th*, we move the lower lip very slightly towards the upper teeth, we change them into *f*.

Φ = I. E. *p* in some cases: κεφαλή, Skr. *kapāla* (cranium); βλέφαρον from βλέπω. In τύφω, R. τυφ for θυφ (to smoke), beside Skr. *dhūp* (suffire), *dhūpayāmi*, and στέφω, R. στεφ, Skr. *sthapāyāmi* (I place), φ has arisen from an older *p*, which was employed to form causatives from the roots *dhū* (to move), and *sthā* (to stand.)

M = I. E. *m*: ἄμα, Skr. *samā* (together), L. *simul*; R. ἐμ, ἐμίω, Skr. *nam* (to vomit), L. *vomo*; ἥμυ-, ἥμισυς, Skr. *sāmi*-,

<sup>\*</sup> See Max Muller, vol. ii., p. 502.

† Ahrens "De Dial. Æol.," pp. 42, 256.

L. *semi-* ; ἡρέμα, Skr. *ram* (to rejoice), Goth. *rimis* (peace) ; με, Skr. and Z. *ma*, L. *me* ; μέσσορ = Skr. *madhyas* = L. *medius*. We find  $\mu$  used for  $\pi$  in Kret. ἄμακις = ἄπαξ ; Lak. δολομάν = δόλοπα (a spy), Lac. Μερσεφόνα = Περσεφόνα ; and  $\mu$  for  $\beta$  in Lak. ἄμυσσορ = ἄβυσσος, and Lak. ἀμάκιον = ἄβαξ.

### §. 56. THE SPIRANT Y.

Although the Greek alphabet contained no special sign for the palatal spirant, traces of its presence are found even more extensively than of that of the Digamma. *Y* must have existed in Græco-Italic times, and even in Greek till after the separation of the dialects from each other. In Homer we find traces of *y* in the frequent lengthening of short syllables before  $\omega$ ς (= *y*ως), as ὄρνιθες  $\omega$ ς, πέλεκυς  $\omega$ ς, &c. *Y* is both a spirant and a semivowel, and hence is easily vocalized.

*Y* =  $\iota$  : ιδίω = Skr. *svīdyāmi* (sudo) ; ε(σ)ῖην = Skr. (α)-*syām* = L. (e)*siem* ; -οιο (gen. sing. term. of *o*-declension) = Skr. -*asya*, as in ἵπποιο = Skr. *as'vasya* ; -σιομες (first plural of Doric future) = Skr. -*syāmas*, as in Dor. πραξίομες, φυλαξίομες, beside Skr. *tōtsyāmas*, &c. ; -ιων (term. of comparative) = I. E. -*yans*, Skr. -*iyans*, as in ἡδίων = Skr. *svādīyans*, &c. ; πάτριος = Skr. *pitryas*, &c. ; φθίρω = φθερῶ, &c. According to Curtius, we find initial  $\iota$  for *y* only in proper names like Ἰάονες = *Yavanas*,\* and in ἰέναι beside Skr. *yá*.

*Y* =  $\epsilon$  : in the Doric future  $\iota$  is kept only before *o*-sounds, as in πραξίω, πραξίομες, &c. ; but before *e*-sounds it becomes  $\epsilon$ , as in ἐργαζῆται ; in milder Doric  $\iota$  always becomes  $\epsilon$ , as in πραξῶ, πραξοῦμες, &c. ; Ion. τέψ, τέοισι = Lesb. τίψ, τίοισι, from  $\tau\iota + o$  ; Argive ὦβρα (eggs) = ὦψα, I. E. *āvyam*, according to Benfey, being a neuter adjective, meaning, "what comes from a bird," from I. E. *avi-* (a bird) ; Δεύνησος = Διόννησος ; ἡνορέη beside ἀνηνορή ; Βορέης for Βοργας (whence

\* Curtius is wrong here, for *Yavanas* is a borrowed word. Ἰάονες, however, may be equivalent to Skr. *yuvānas*.

*Βορῤῥᾱς*, by assimilation), which is a spondee in *Iliad* I. 5, Ψ 195; *στερεός*, Att. *στερῤῥός*, for *στεργος*, feminine *στεῖρα* for *στεργα*; *κενεός*, Æol. *κέννος*, Ep. *κεινός*, for *κενγος* = Skr. *s'ūnyas* (empty) = I. E. *kvanyas*; *ἐτεός* = Skr. *satyas* (true); *εἰνάτερες* beside L. *janitrices*, *γα* becoming *εε*, and this again *ει*; *εὔτε* = *εοτε* for *γοτε*; *δοκέω*, *γαμέω*, &c., for *δοκγω*, *γαμγω*, &c.\* In such forms as *πόλεως*, *ε* does not stand for *γ*, but *πόλεως* = *πόλεος* for *πολεγος*, *εγ* being the guna of *ι*. Curtius considers that *ε* in *δωρεά*, *συκέα*, *κρανέα*, &c., beside *δωριά* (Hesych.), *συκία*, *κρανία*, &c., represents *εγ*, and not *γ*; these words being originally collectives in *-γᾱ*; *δωρεά*, from an older *δωρεια*, means, therefore, "a collection of gifts;" *συκέα*, "a collection of figs;" and hence "the fig tree" itself, &c. Similarly *τέλεος* = *τέλειος* for *τελεσγος*, *γενεά* = *γενεια* for *γενεσγα*. In Modern Greek we sometimes find the old *ε* represented by *γ*; and even in ancient times *ε* before vowels must have had a peculiar pronunciation, since we find *θεοί*, *νέα*, &c., frequently treated as monosyllables. The Modern Greeks also frequently represent the *γ* of other languages by *ε*, as *Βέασα* = Skr. *Vyāsa* (*Ἰνδικαὶ μεταφράσεις* of Galanus).

*Y* = *υ* in *κύανος* (a dark blue substance) = Skr. *sýāmas* (dark), *υ* here being equivalent to *u*†.

*Y* = Spiritus asper: *ἥπαρ*, Skr. *yakṛt* (liver); L. *jecur*; *ύμεῖς*, Skr. *yushmat* (abl. pl.); *ῥα*, Z. *yāre* (a year); *ύσμῖνη*, R. *ύθ* = Skr. *yudh* (to fight); *ἄγιος* = Skr. *yag'yas* (to be honoured by sacrifice).

*Y* has disappeared in Æol. *ῥυμμες*; fut. term. *-σω* = Dor. *σίω*, from I. E. *-syāmi*; term. s. *-έω*, *-άω*, *-όω*, as *τελέω* for *τελεσγω*, *φορέω* = Skr. *bharayāmi*, &c.; gen. term. *ου* for *οο* = *οιο* = *οσιο* = Skr. *asya*, as in *ἵππου* = *ἵπποιο*, &c.; *πλέον* beside *πλείον*; Æol. *πάλαος*, *ἀλάθεια*, *λαχόην*, beside *παλαιός*, *ἀλήθεια*, *λαχοίην*; Ep. *ὠκέα* = *ὠκεῖα*; *κάω* = *καίω*, &c. \*

*Y* = *γ*: *ἄγουρος* = *ἄωρος*, *ἄγουρον* being read by Aristo-

\* Consult Curtius, "Grundzüge," p. 538; and "Tempora und Modi," pp. 92, 93.

phanes in place of ἄκουρον in Od. η 64; Kyprian θίαγον (sulphur) = Ion. θεήιον; Kyprian ἀπόγεμε (ἄφελκε, Hesych.) and ὕγγεμος (συλλαβή, Hesych.) from root γαμ = Skr. *yam* (to take), L. *em-o*; whence comes γέντο. In Bæot. ἰών = ἐγών, Tarent. ὀλίος = ὀλίγος, σίαλος (fat) beside σιγαλόεις (shining, Φιαλία = Φιγαλία, γ appears to have been lost from its approximating to the sound of *y*. In L. *spargo* = σπείρω for σπεργω, *g* = *y*. In Modern Greek γ (pronounced *y*) has arisen from and beside the old ι, as in χωργά = χωριά, μυῖγα = μυῖα, κλαίγω = κλαίω, αὐγόν (an egg) = I. E. *avyam*. Curtius remarks that the Doric future term. -ξω of verbs in -ζω, as δικάζω, Dor. fut. δικάξῶ, is a proof that the old *y* was not far removed from the gutturals.

Y = Z: Ζεά (spelt), Skr. *yava* (barley); R. Ζεε, Ζέω, ἔζεσμαι (to gush, boil), Skr. *yas* (to strive), *niryas* (to perspire); Ζημία, Ζητρός (a hangman); Skr. *yam* (to restrain); Ζητέω, Skr. *yat* (to strive), which is connected with *yâ* (to go); Ζιζυφον, a tree, the fruit of which is called *jujubæ*; Ζυγόν = Skr. *yugam*, L. *jugum*; Ζωμός (soup), Skr. *yusha* (pease porridge), L. *jus*; Ζώνη, Ζώννυμι, Ζούσθω (= Ζωννίσθω, Heysch.), Skr. *yu* (to bind); in the verbal terminations -αζω, -ιζω, beside Skr. -*ayâmi*, which became in Greek either -αζω, or, by the falling out of *y*, -αω, -οω, -εω, -ῶ. In these cases the original *y* produced *d* before it, and this *dy* became *dz* and then *z*. We find a similar phenomenon in other languages; thus we have Ital. *diacere*, *diacinto*, *maggiore*, from L. *jacere*, *hyacinthus*, *major*; Middle Lat. *madius*, from L. *majus*; Mod. Gr. διαάκι, from οἰάκιον (the tiller); Goth. *daddja* (lacto) = O. H. G. *tâju*, Skr. *dhayâmi*; Goth. *tvaddjê*, for *tvajê*, gen. of *tvai*; Goth. *iddja* (I went) = Skr. *iyâya*, Gr. ἦια. This assumption by *y* of a parasitic *d* is similar to that by *v* of a parasitic *g*, in Ital. *guastar*, from L. *vastare*, &c. When *y* had assumed this parasitic *d*, it frequently became δι instead of ζ, as in the suffix -διος, in διχθάδιος, ῥητίδιος, &c., and the Æolic patronymics in -αδιος, from A-stems, as Ὑρράδιος,

**Τινάδιος.** The corresponding patronymics in Skr. end in *-éyas* (nom. sing. masc.), *dáséyas* (the son of a slave), from *dása* (a slave); and in Latin in *-ejus*, *plebejus*, *Pompejus*, &c. The termination of ἴδιος (Dor. **Ἔιδιος**) is explained in the same way by Curtius; the root is *é* for **σFe**, Skr. *sva*, L. *se*, whence we have ἴδιος through the steps **σFeγος**, **σFeδγος**, **σFeδιος**, **Feδιος**, whence finally ἴδιος. Such patronymic forms, as **Τύρῥαιος** (Ahrens, "De Dial. Æol.," p. 158), are related to Ὑῥῥάδιος, as the verbal term, *-aw* to *-aζω*. As *y* becomes *ε* in some cases, so *δι* becomes *δε*, as in the term *-δεος*, Att. *δεῶς*, ἀδελφίδεος, Att. ἀδελφιδούς. We frequently find *y*, after it has produced before it the parasitic *δ*, vanishing and *δ* alone remaining; Bæot. *δυγόν* = *ζυγόν*; Bæot. *δωμός* = *ζωμός*; Dor. *δατέν* = *ζητεῖν*; *χθές* = *χδεε* (by assimilation) = *χδγεε* = *χγεε* = I. E. *ghyas*, whence Skr. *hyas*, L. *heri*, *hes-ternus*; *ροῖβδος* (a rushing noise) = *ροῖFδγος* = *ροῖFγος* (from *ροFγος* by umlaut), connected by Curtius either with L. *rumor*, or with R. *ρῦ* (to flow), *Ῥοῖζος*, another form of *ροῖβδος*, is from *ροιδγος*. Curtius connects *δή* with L. *jam*, Goth. *ju* (already); he treats *δή* as an instrumental, and *jam* as a locative of the same pronominal root *ja*. Beside Hom. *ἀμέρδω* (I rob), Pindar has *ἀμείρω*, both being from *ἀμεργω*, R. *μερ*. *Ἐχιδνα* is perhaps for *ἐχινδα* by metathesis, which is for *ἐχινγα*, a feminine form of *ἐχίς*; this feminine termination *-νγα* is found directly in *πότνια*, as *-ινα* by umlaut in *δέσποινα*, *θεία*, *λύκαινα*, which correspond to the Latin forms *gallina*, *regina*, *Diana* for *Deana*, and this again for *Deaina*, *Deania*, and as *-ννα* by assimilation in the Æolic forms *Κόριννα*, *Βασίλιννα*. *Μόλυβδος* is for *μολυβγος*, which is related to the older form *μόλυβος*, as *χρυσίον* to *χρυσός*. *Ῥάβδος* is for *ῥαβδγος* = *ῥαπδγος* = *ῥαπγος*, which is related to *ῥάπις*, as *δάκρυον* to *δακρυ*. *Λάβδακος* is for *ΛαFιακος* from *Λάϊος* (popular) from *λαFός* (the people).\*

\* For additional examples consult Curtius, "Grundzüge," p. 559, seq., to whom I am chiefly indebted for the materials of this and the following section.

## §. 57. THE DIGAMMA.

The sound of **F** was very nearly the same as that of the *E. w.* Dionysius of Halikarnassus defines it as *ου συλλαβὴ ἐνὶ στοιχείῳ γραφομένη*. It is both a spirant and a semivowel; and, as a semivowel, is easily vocalized.

**F = v**: We have six cases where initial **F** becomes *v*: *ύάλη* (a worm, Hesych.) *ύάλεται* (it breeds worms, Hesych.), from *R. Fελ* (to twist), whence *εὐλή* (a worm), *ἐλ-μινς*; *Ύέλη* (Herod. I., 167), the Italian town commonly called Elea or Velia; *ύεις* (*στολή Πάφιοι*), *ύεστάκα* (clothing), perhaps from a nom. *ύεσταξ*, from *R. Fες* (to clothe), *L. vestis*; *ύή* (the vine), *υῖόν* (the wild vine), connected with *L. viere, vitis*, with which Curtius also connects *οἶνος* and *L. vinum*; *ύίλη* (a host, Hesych.), beside *Lacon. βείλη = ἴλη* (a host), from *R. Fελ*, *Skr. var* (to surround); *ύρειγαλέον* (a cleft), beside *Hom. ῥωγαλέον*. The change of **F** into *v* is very common in the middle of words: *κύων* = *Skr. s'vā* (a dog); *κνέω* (I am pregnant), *Skr. s'vagāmi* (I swell); *εἰλύω*, *L. volvo*; *βίδυοι* (or *βίδεοι*, certain Spartan magistrates), meaning *συνίστορες, μάρτυρες*, from *R. Fιδ*, and suffix **-Fo**, **-Fa** = *Skr. -va*, and *L. -vo, -va*, *βίδυος* (*Att. ιδύος* or *ιδυῖος*). When **F** is vocalized, it is frequently thrown back into the preceding syllable, as in *ταῦρος* through *ταυρFος*, from *ταρFος* = *Gall. tarvos*; *Ion. οὔλος* = *ῥλος* from *ὀλFος* = *Skr. sarvas* (all); *γουνός*, *γούνα* from *γονFος*, *γονFa*, gen. sing. and nom. pl. of *γόνυ*; *δουρός* from *δορFος*, gen. sing. of *δόρυ*; *οὐλαί* (*Att. ὀλαί*, *L. mola*), from *ὀλFa*, as the Syracusan word *ὀλβαχόϊον* (a bread basket) proves. In the Lesbian-Æolic **F** between two vowels became *v*, and thus formed a diphthong with the preceding vowel, as in *αῦως* (*Lak. ἄβώρ*), *φαῦος* (*Pamph. φάβος*) (*Ahrens, "De Dial. Æol.," p. 36, seq.*).

**F = o**: *δοάν* in *Alkman* = *δήν* from *δFην* = *διFαν*, acc. of *St. διFa* (a day); *δοάσσατο* (it seemed) from *R. διF*, *Skr. div*

(to shine), for **δ**Φασσατο; ζύασον = σβέσον (Hesych.), **F** becoming in the one case *ο*, and in the other *β*, the root being σ**F**εξ = I. E. *svas*, connected with G. *sausen* (to whistle), and O. S. *svistu* (sibilus), not connected with Skr. *s'vas* (to breathe), which is = I. E. *kvās*, L. *queri*, R. *ques*, E. *whistle*, *wheeze*, the **F** is entirely lost in ζέινυμεν = σβέννυμεν (Hesych.); δαιοί (two) for δ**F**ιοι from St. δ**F**ι, δίς, L. *bis*; κοάξ (the croaking of frogs) = G. *quak*, E. *quack*; κοιζειν (to squeak like a young pig) from κοί, G. *quiek*, E. *squeak*; Ὀαξος (the Kretan town \*Αξος) the inhabitants of which are called Φάξιοι upon coins, and the district is called Οίαξις by Apollonius Rhodius, where *οι* (= *u*<sup>i</sup>) very nearly has the sound of *υ*; Οιάνθη, or Οιάνθεια (a Lokrian town), called in Plutarch Ὑάνθεια, from **F**ι-ανθη (violet blossoms); Ὀιλεῦς = Ἰλεῦς, from **F**ίλη (a host); ὀρύδαμος (a sprout) = ῥάδαμος, beside Æol. βρίσδα = **F**ριδία, ῥίζα; Οἴτυλος (a Laconian town), also called Βείτυλος (Βίτουλα by Ptolemy) from **F**ιτυλος; Ὀλισσὴν (a Kretan town), called by the later Kretans Βλίσσῃν; οἰσῦα, οἶσος (osier), beside Ἰτυς, Æol. βίτυς for **F**ιτυς, L. *vies*, *vimen*. The Sicilian river \*Ανις was sometimes called \*Ωανις, where *ω* represents **F**. This change of **F** into *ο* is similar to that of *γ* into *ε*; for, as *γ* became first *ι* and then *ε*, so **F** became first *υ* and then *ο*. In O. H. G. we find *ο* for *υ*, as in *snéo* = Goth. *snaiws*. It is not probable that **F** ever became *ι*; for then it must have passed through the three stages, *υ*, *υ*<sup>i</sup>, *ι*, which is not likely; and in nearly all the cases adduced in proof of this change, *ι* is susceptible of another explanation. Thus in ὥϊον = L. *ovum*, **F** was present along with *ι*, as is proved by the Argive ὥβιον, from ὥ**F**ιον; πλείειν = πλε**F**γειν, while πλέειν = πλε**F**ειν, *γα* being a common verbal suffix; ἀδελφεός = ἀδελ**F**ειος from St. ἀδελ**F**ε = ἀδελ**υ** and suffix *γα*; ιαρεῖον (πρόβατον, βοῦς, Hesych.) is from ιερός, Dor. ιαρός, and not from St. **F**αρν (a sheep), &c.

After a prosthetic vowel **F** vanishes, as in Kret. ἄερσα,

Hom. *ἑρση* = *ἔρση* (dew), Skr. *varsha* (rain); *ἄλοξ* (a furrow), Hom. *αὔλαξ*, Dor. *ῶλαξ* for *ἄΦλαξ*, from R. *Φελκ* (to drag); *ἄθλον* (a prize), for *ἄΦεθλον*, beside L. *vas*, St. *vad* (Leo Meyer, however, connects this with L. *avere*, *avidus*, and treats *θλο* as a suffix, the same as *τρο*); *ἑίκοσι* = *ἑΦεκοσι*; Hom. *ἔδνα* = *ἔδνα* from R. *σΦαδ*, whence *ἡδύς*, &c., Skr. *svad* (to please), *svādu* (sweet) = *ἡδύς*, &c.

**F** = spir. asp.: *ἔσπερος*, L. *vesper*; *ἔννυμι* for *ἑσνυμι*, R. *Φεγ*, L. *vestire*; *ἴστωρ* from R. *Φιδ*; *ὄφεις*, for *ὀπίς* = *ὀπΦεγ*; *Ἑνεοί* = Veneti; *Ἑστία* beside *Vesta*. We find a similar change in Fr. *hors* = L. *foras*, in Sp. *haba*, *harina*, *heno*, *hijo*, *herir* = L. *faba*, *farina*, *fœnum*, *filius*, *ferire*.

**F** = *β*: *βούλομαι*, R. *βολ* = Skr. *var* (to choose), L. *volo*; *ἴβυξ* (the name of an ὄρνειον κρακτικόν), beside *λυγή* (shrieking), St. *ἰΦυγ*; *ὀροβος* beside L. *ervum*; *ὄλβος* beside *όλοός* = L. *salvus*, &c. We find this change frequently in the dialects: in Lesbian we find *β* for **F** before *ρ*, as in *βρόδον*, *βρίσδα*, *Βραδάμανθους*, &c.; in Lak. we have *βείκατι* = *εἴκοσι*, *βεκάς* = *έκάς*, *ἄβήρ* = *άήρ*, *ὠβά* beside *ὀγή* (*κώμη*) and *οὔαί* (*φυλαί*); &c. We find a similar change in L. *ferbui* for *fervui*, *bubile* for *bovile*; and in G. *Schwalbe*, *Farbe*, *Erbse*, &c., from O. H. G. *swalawá*, *farawá*, *araweiz*, &c.

**F** = *μ*: *ἄμνός* = *ἄΦινος* beside *ὄϊς* = Skr. *avis*, Lith. *avinas* (mutton); *ἄμνός*, therefore, is equivalent in meaning to *ovilis*, and then easily comes to mean *lamb*; *μαλλός* (shaggy hair) beside L. *villus*, *vellus*, from same root as *οὔλος* (crisp), *ἔριον* (wool), Skr. *urā* (a sheep), *úrṇa* (wool); E. *wool*; *μελδόμενος* (*ἐπιθυμῶν*, Hesych.) beside *ἔλδομαι* and *ἑέλδομαι* (*ἐπιθυμῶν*) from R. *Φελδ*, as is proved by the last form with the prosthetic *ε*; *μολπίς* = *ἐλπής* from R. *Φελπ*, whence *ἔολπα*, *ἑέλπετο*; *ἀμφήν* = *Æol.* *αὐφήν* = *αὐχήν* (the neck). Conversely we find *v* in place of *m* in Lith. *vidūi* = *μέσσοι*, Ch. Sl. *črǔvǐ* (a worm) = Skr. *krmis*, *prǔvy* = L. *primus*, Skr. *vayam* (we), Goth. *veis* (we), beside Skr. *mām* (me), &c.

The change of **F** into *γ* is very doubtful: we find *ἀγάτη*

μαι (βίβλαμμαι) from ἄφατα = ἄτη, Pindaric ἀνάτα; φέγγος for φειφος which is related to φάος, Æol. φαῦος, Pamphyl. φάβος, as βένθος to βάθος, and πένθος to πάθος. The other cases in which this change is said to occur are words of very uncertain origin.

We find  $\phi = F$  in σφε = Skr. *sra*, and σφόγγος beside Goth. *svammis* (a sponge), E. *swim*; ρ = F in Kret. τρέ, δεδροικώς, for τφε, δεδφοικως; π is said to be = F in Πάξος found in Skylax for Ὀαξος, but the reading is doubtful; in Kret. πύλχος = ὄχλος, but these words may be of different origin, the root of πύλχος, perhaps, being πελ found in πολύς, L. *populus*; Lac. ἀμπέσαι = ἀμφίεσαι, which Ahrens derives from αμ - Fεσαι, ἀμ being for ἀμφί: Curtius, however, considers the π to be due to the influence of the φ of ἀμφί; Lac. ἀπέλλα = ἄφελλα, according to Ahrens, from ἄ = ἄ (together) and R. Fελ found in εἴλειν (to press), ἄολλής (crowded together); but, as we have the forms ἀπείλλω, Æol. ἀπέλλω (ἀποκλείω, Hesych.), it is possible that the π may be due to the preposition ἀπό, and not to the F. Ἀπειλή (threatening) may be from this root, and mean literally "shutting out," "excommunication."

The existence of F is in many cases shown by its effects on a preceding consonant, as in πύσος (Ion. κόσος) for κφοςος, or on a following vowel, as in ὄχος for Fεχος, Dor. τέτορες for τετφαρες, Æol. ὕραιος = Skr. *Varuṇas*, beside οὐρανός, Æol. ὦρανος, Dor. ὠρανός, F becoming o, and oo then ou, Æol. and Dor. ω. This effect of F or v on a following vowel is found also in κοδράντης = L. *quadrans*, L. *socer* Skr. *s'vas'uras*, L. *socrus* = Skr. *s'vas'rūs*, L. *soror*, beside Skr. *svāsar* (sister), &c.; and in the pronunciation of a in E. *water*, *what*, &c.

## §. 58. ASSIMILATION.

I. When two consonants come together, the first is often made the *same* as the second. Thus  $\nu\nu = \sigma\nu$  in  $\xi\nu\nu\mu\iota = \text{F}\epsilon\sigma\text{-}\nu\mu\iota$ , R.  $\text{F}\epsilon\varsigma$ ;  $\zeta\omega\nu\nu\mu\iota = \zeta\omega\sigma\text{-}\nu\mu\iota$ , Skr.  $y\mu$  (to bind);  $\text{\AE}ol.$   $\phi\acute{\alpha}\epsilon\nu\nu\omicron\varsigma = \phi\alpha\epsilon\sigma\nu\omicron\varsigma$  from  $\phi\acute{\alpha}\omicron\varsigma$ , St.  $\phi\alpha\epsilon\varsigma$ , found in  $\phi\alpha\epsilon\sigma\phi\acute{o}\rho\omicron\varsigma$ ;  $\text{\AE}ol.$   $\delta\text{r}\epsilon\nu\nu\omicron\varsigma = \delta\text{r}\epsilon\sigma\nu\omicron\varsigma$ , from  $\delta\text{r}\omicron\varsigma$ , St.  $\delta\text{r}\epsilon\varsigma$  found in  $\delta\text{r}\epsilon\sigma\kappa\acute{\eta}\omicron\varsigma$ ;  $\epsilon\text{r}\acute{\epsilon}\beta\epsilon\nu\nu\omicron\varsigma = \epsilon\text{r}\acute{\epsilon}\beta\epsilon\sigma\nu\omicron\varsigma$ , from  $\epsilon\text{r}\epsilon\beta\omicron\varsigma$ , St.  $\epsilon\text{r}\epsilon\beta\epsilon\varsigma$ , found in  $\epsilon\text{r}\acute{\epsilon}\beta\epsilon\sigma\phi\iota$ ;  $\xi\nu\nu\epsilon\omicron\nu$  (they swam, Il. xxi. 11) =  $\epsilon\sigma\nu\epsilon\omicron\nu$ , R.  $\nu\nu$  for  $\sigma\nu$ , Skr.  $snu$  (to flow).  $N\nu = \tau\nu$  in  $\kappa\alpha\nu\nu\epsilon\acute{\upsilon}\sigma\alpha\nu$  (Od. xv. 464) =  $\kappa\alpha\tau\text{-}\nu\epsilon\acute{\upsilon}\sigma\alpha\nu$ .  $M\mu = \nu\mu$  in  $\kappa\alpha\mu\mu\omicron\nu\acute{\iota}\eta = \kappa\alpha\tau\text{-}\mu\omicron\nu\eta$ ;  $\kappa\acute{\alpha}\mu\mu\omicron\text{r}\omicron\varsigma$  (in Od., but never in Il.) =  $\kappa\alpha\tau\text{-}\mu\omicron\text{r}\omicron\varsigma$ .  $M\mu = \sigma\mu$  in  $\text{\AE}ol.$   $\xi\mu\mu\iota = \epsilon\sigma\mu\iota$ ;  $\text{\AE}ol.$   $\xi\mu\mu\epsilon\nu\omicron\varsigma$ ,  $\xi\mu\mu\alpha = \epsilon\sigma\text{-}\mu\epsilon\nu\omicron\varsigma$ ,  $\epsilon\sigma\text{-}\mu\alpha$ , R.  $\text{F}\epsilon\varsigma$ ;  $\text{\AE}ol.$   $\chi\text{r}\acute{\iota}\mu\mu\alpha = \chi\text{r}\acute{\iota}\sigma\mu\alpha$ ; Lesb.  $\acute{\alpha}\mu\mu\epsilon\varsigma$ ,  $\upsilon\mu\mu\epsilon\varsigma$ , beside Skr. *asman*, *yushman*;  $\phi\iota\lambda\omicron\mu\mu\epsilon\acute{\iota}\delta\eta\varsigma = \phi\iota\lambda\omicron\text{-}\sigma\mu\epsilon\acute{\iota}\delta\eta\varsigma$ , Skr. *smi* (to laugh), E. *smile*.  $M\mu = \gamma\mu$  in Dor.  $\pi\acute{o}\upsilon\mu\mu\alpha$  (ή της χειρός πυγμή, Hesych.).  $M\mu = \beta\mu$ ,  $\pi\mu$ ,  $\phi\mu$ , in  $\kappa\omicron\mu\mu\acute{o}\varsigma$  (a striking) from R.  $\kappa\omicron\pi$  (as L. *summus* = *sur-mus*),  $\tau\acute{\epsilon}\tau\text{r}\mu\mu\alpha\iota$  from R.  $\tau\text{r}\iota\beta$ ,  $\gamma\text{r}\acute{\alpha}\mu\mu\alpha$  from R.  $\gamma\text{r}\alpha\phi$ , &c.  $\Lambda\lambda = \pi\lambda$  in Lak.  $\acute{\alpha}\lambda\lambda\alpha\nu\acute{\eta}\varsigma$  (safe) =  $\acute{\alpha}\pi\lambda\alpha\nu\acute{\eta}\varsigma$ .  $\Lambda\lambda = \nu\lambda$  in  $\sigma\upsilon\lambda\lambda\acute{\epsilon}\gamma\epsilon\iota\nu = \sigma\upsilon\nu\text{-}\lambda\epsilon\gamma\epsilon\iota\nu$ , &c.  $\Lambda\lambda = \tau\lambda$  in  $\kappa\alpha\lambda\lambda\iota\pi\acute{\epsilon}\epsilon\iota\nu$  (Od. xvi. 296) =  $\kappa\alpha\tau\text{-}\lambda\iota\pi\epsilon\epsilon\iota\nu$ .  $\text{Τ}\pi = \mu\pi$  in Bæot.  $\epsilon\pi\pi\alpha\sigma\iota\varsigma = \epsilon\mu\pi\alpha\sigma\iota\varsigma$  (ἐγκτησις);  $\Gamma\lambda\upsilon\pi\pi\acute{\iota}\alpha$  (the name of a Lakonian village) =  $\Gamma\lambda\upsilon\mu\pi\acute{\iota}\alpha$ ;  $\Lambda\acute{\alpha}\pi\pi\alpha$  (the name of a town in Krete) =  $\Lambda\acute{\alpha}\mu\pi\alpha$ .  $\Pi\pi = \tau\pi$  in  $\kappa\acute{\alpha}\pi\pi\epsilon\sigma\omicron\nu = \kappa\alpha\tau\text{-}\pi\epsilon\sigma\omicron\nu$ .  $B\beta = \pi\beta$  in  $\upsilon\beta\beta\acute{\alpha}\lambda\lambda\epsilon\iota\nu$  (Il. xix. 80) =  $\upsilon\pi\text{-}\beta\alpha\lambda\lambda\epsilon\iota\nu$ .  $B\beta = \tau\beta$  in  $\kappa\acute{\alpha}\beta\beta\alpha\lambda\epsilon = \kappa\alpha\tau\text{-}\beta\alpha\lambda\epsilon$ .  $\Delta\delta = \tau\delta$  in  $\kappa\acute{\alpha}\delta\ \delta\acute{\epsilon} = \kappa\acute{\alpha}\tau\ \delta\acute{\epsilon}$ .  $\Gamma\gamma = \tau\gamma$  in  $\kappa\acute{\alpha}\gamma\ \gamma\acute{o}\nu\upsilon = \kappa\acute{\alpha}\tau\ \gamma\acute{o}\nu\upsilon$ .  $K\kappa = \tau\kappa$  in  $\kappa\acute{\alpha}\kappa\ \kappa\omicron\rho\upsilon\phi\acute{\eta}\nu = \kappa\acute{\alpha}\tau\ \kappa$ . and  $\kappa\acute{\alpha}\kappa\ \kappa\epsilon\phi\alpha\lambda\acute{\eta}\varsigma = \kappa\acute{\alpha}\tau\ \kappa$ .  $K\kappa = \sigma\kappa$  in Lak.  $\acute{\alpha}\kappa\kappa\acute{o}\rho = \acute{\alpha}\sigma\text{-}\kappa\acute{o}\rho$ ,  $\delta\iota\delta\acute{\alpha}\kappa\kappa\epsilon\iota = \delta\iota\delta\acute{\alpha}\sigma\kappa\epsilon\iota$  (in Decr. in Timoth.), Lak. (?)  $\kappa\alpha\kappa\acute{k}\acute{o}\varsigma$  (ὁ μικρὸς δάκτυλος, Hesych.) =  $\kappa\alpha\sigma\acute{k}\acute{o}\varsigma$ .  $\text{Τ}\tau = \sigma\tau$  in Bæot.  $\acute{\iota}\tau\tau\omega$ ,  $\acute{\epsilon}\tau\tau\epsilon$ ,  $\acute{\epsilon}\tau\tau\iota\alpha$ ,  $\acute{\epsilon}\tau\tau\alpha\sigma\alpha\nu = \acute{\iota}\sigma\tau\omega$ ,  $\acute{\epsilon}\sigma\tau\epsilon$ ,  $\acute{\epsilon}\sigma\tau\acute{\iota}\alpha$ ,  $\acute{\epsilon}\sigma\tau\eta\sigma\alpha\nu$ ; Lak.  $\beta\epsilon\tau\tau\acute{o}\nu$  (a garment) beside  $\beta\epsilon\sigma\tau\acute{o}\nu = \acute{\epsilon}\sigma\tau\acute{o}\nu$ ; Lak.  $\kappa\acute{\iota}\tau\tau\omicron\rho = \kappa\acute{\iota}\sigma\text{-}\tau\omicron\varsigma$ ; Lak.  $\acute{\alpha}\tau\tau\alpha\sigma\iota$  for  $\acute{\alpha}\nu\sigma\tau\alpha\theta\iota = \acute{\alpha}\nu\acute{\alpha}\sigma\tau\eta\theta\iota$ .  $\text{Τ}\tau = \delta\tau$  in Tar.  $\acute{\alpha}\phi\text{r}\alpha\tau\text{-}\tau\omicron\varsigma$  (ή Ἐκάτη παρά Ταραντίνοις) =  $\acute{\alpha}\phi\text{r}\alpha\delta\text{-}\tau\omicron\varsigma$ .  $\text{Τ}\tau = \kappa\tau$  in  $\Lambda\acute{\upsilon}\tau\tau\omicron\varsigma$  (a Kretan town) beside  $\Lambda\acute{\upsilon}\kappa\tau\omicron\varsigma$ .  $\text{Ρ}\rho = \sigma\rho$  in  $\acute{\epsilon}\rho\text{r}\epsilon\omicron\nu = \acute{\epsilon}\sigma\text{r}\epsilon\omicron\nu$ ,

περίρρυτος = περιρρυτος, beside ἀμφίρυτος, χειμάρροος, καλλιρροος beside καλλίροος, all from R. ρν for ρου = Skr. *ru* (to flow). Ρρ = νρ in ἀγάρροος from ἄγαν and R. ρν; συρρέειν = συν-ρειν, &c.. Ρρ = τρ in καρρέζουσα (Il. v. 424) = κατ-ρεζουσα. Ρρ = Φρ in ἑρρίψε = ἑφριψε; ἀντίρροπος from R. Φρεπ; πρόρριζος from Φρίζα, with which root may be connected περιρρήδης (headlong); ἄρρηκτος, Æol. αὔρηκτος from R. Φραγ, L. *frango*; &c. Σς = νς in συσσίτιον = συνσίτιον, and other compounds of συν, except when ζ or σ followed by a consonant come after, in which cases ν is dropped, as in σύζυγος, σύστημα. The ν in ἐν is always kept, and the ν in πᾶν and πάλιν is either kept or assimilated to the following σ. Σσ = δς in Hom. ποσσί = ποδ-σι. Σς = κς in δισσός, τρισσός beside διξός, τριξός, ξ becoming σσ through the steps χς, ης. This is Ebel's view, who compares L. *nisu* s= *nixus*. Ch. Sl. *desinu* (dexter), Ir. *des* (dexter), Ir. *ass* and *ess* = L. *ex* beside *ectar* (extra), Umb. *testru* = L. *dextro*, &c. Curtius considers δισσός to have arisen from δφίτος = Skr. *dvitīyas* for *dvityas*.

II. When two consonants come together, the second is often made the *same* as the first. This is very common in Æolic, especially when a liquid is followed by F, γ, or σ. Thus νν = νσ in Æol. μῆννος (a month) beside L. *mensis*; Æol. ἐγγέννατο, κτένναι = ἐγενσατο, κτενσαι; ἔννεπε = ἐνσεπε, L. *insece*. Νν = νF in Æol. γόννος = γουνός from γονΦος. Νν = νγ in Æol. κτέννω = κτείνω from κτενγω; Æol. κρίννω = κρίνω from κρινγω; Æol. κέννος = Skr. *s'ūnyas* (empty), Ion. κεινός, κενός, Att. κενός. Μμ = μσ in ἐνέμματο = ἐνεμσατο. Αλ = λν in ὄλλυμι = ὀλνυμι, as E. *ell* = *eln*, L. *ulna*, and E. *full* = *fuln*, Skr. *pūrṇa* (full), L. *plenus*. Αλ = λσ in Æol. ἔστέλλα = ἐστελσα. Αλ = λF in πολλή = πολFη from πολύ; κυλλός (crooked) = κυλΦος L. *curvus*. Αλ = λγ in ἄλλος = ἄλγος, L. *alius*; φύλλον = φυλγον, L. *folium*; μᾶλλον = μαλιον; ἄλλομαι = ἄλγομαι, L. *salio*; κάλλος, καλλύνω, Dor. καλλά (καλῶς), beside Skr. *kalya* (sound); στέλλω = στελγω; Hom. ὀφέλλω = ὀφείλω from ὀφελγω. Ππ = πμ and φμ in Æol.

ὄππατα, ἄλιππα for ὄμματα, ἄλειμμα from the roots ὀπ and ἄλιφ. Δδ = δγ in the Bæotic forms μᾶδδα = μᾶζα = μαδγα for μαγ-γα; σφάδδω = σφαδγω for σφαγγω; σαλπιδδω = σαλπιδγω for σαλπιγγω; ῥέδδω = ῥέζω, Att. ἔρδω = ῥεδγω for Φρεγ-γω, R. Φρεγ and Φεργ; the same change is found in Lakonic, as is proved by the examples in the Lysistrata, γυμνάδδομαι (82) μυσιδδω for μυθίζω (94), ποτιδδει for προσούζει (206), &c. When δγ is initial, we sometimes find it represented by δ instead of δδ, as in Bæot. Δεύς = Ζεύς, Δάν = Ζήν, δυγόν = ζυγόν; Lak. δωμός = ζωμός; δα- = ζα- from διά in δαφοινός, δάσκιος. Κκ = κρ in Bæot. μικκός = μικρός. Κκ = κF in Æol. ἴκκος = L. *equus*; γλυκκόν (γλυκύ, Hesych.) = γλυκFον; πελεκκᾶν = πελεκFαν from πέλεκυς. Ττ = τς in καττεύειν = κατσειν. Ττ = τF in τέτταρες = τετFαρες. Ττ = τυ in the Attic forms, μέλιττα = μελιτγα; κρείττων = κρειτγων; περιττός = περιτγος; νεοττός = νεοτγος. Ρρ = ρσ in ἄρρην = ἄρσην, ἄρριχος (a basket) = ἄρσιχος, θάρρος = θάρσος, πόρρω = πορσω beside πρόσω, ὄρρος perhaps from ὀρσος, πυρρός = πυρρός, Att. χέρρος (dry land) = χέρσος, Att. κόρρη = κύρση. Ρρ = ρν in μύρρα = σμύρνα. Ρρ = ργ in the Æolic forms φθέρρω = φθεργω, πέρροχος = περίοχος, περρέχειν = περιέχειν, περρῖ ἀπάλω (in Theokr. 29, 25) for περὶ ἀπάλω, Πέρραμος = Πρίαμος, μέτερρος = μέτριος, &c. Σσ = σF in Hom. πόδεσσι = ποδεσFi from St. ποδε for ποδ (in later Greek this σF becomes σ, as in πόλεσι, &c., which, however, does not fall out, as it represents the old σσ); Æol. ἴσσοις = FισFος, ἴσος, Skr. *vishu* (æque); traces of the initial F being found in Hom. ἔϊση and Lak. βίωρ = ἴσως. Σς = σγ in ἔσσομαι = ἐσγομαι; νίσσομαι = νισγομαι from R. νες, found in νέομαι, νόστος, Νέστωρ, Skr. *nas* (to come); πτίσσω = πτίσγω, L. *pinso*, Skr. *pish* (to pound).

III. When two consonants come together, the first is generally made *like* the second. Thus, when labials or gutturals precede mute dentals, they must be of the same order as the following dental; hence the only combinations allowed are κτ, πτ, γδ, βδ, χθ, φθ, as in λεκτός for λεγτος, R. λεγ, γραπτός

for γραφτος, and γράβδην for γραφδην, R. γραφ, λεχθῆναι for λεγθῆναι, R. λεγ, τυφθῆναι for τυπθῆναι, R. τυπ. Before σ, γ and χ become κ, and β and φ become π, as in ἄξω, R. αγ, τρίψω, R. τριβ, γράψω, R. γραφ. Before μ a guttural becomes γ, and a dental becomes σ, as in διωγμός from διώκω, βέβρεγμα from βρέχω, ἥνυσμαι from ἄνύτω, πέπεισμαι from πείθω, ἴσμεν beside οἶδα; sometimes this change does not occur, as in ἀκμή, δραχμή, ῥυθμός, ἀριθμός, ἀτμός, and in compounds with preposition ἐκ, also in the Ionic forms ὀδμή = Att. ὀσμή, ἴδμεν = Att. ἴσμεν, κεκορυθμένος = Att. κεκορυσμένος, ἴκμενος (favourable), ἀκαχμένος from R. ακ (to sharpen), ἀϋτμή (breath). N becomes μ before labials, and nasal γ before gutturals, as in ἔμπειρος from ἐν, πείρα, συγκαλέω from σύν, καλέω, &c. Labials become μ before ν, as in σεμνός from R. σεβ, σέβομαι; but we find ὕπνος beside L. *somnus*. T frequently becomes σ before ν and ι, as in σύ = Dor. τύ, suffix -συνη for -τυνη, φησί = Dor. φατί, φάσις = Hom. φάτις, πλούσιος from πλούτος, εἴκοσι = Dor. Εἵκατι, φέρουσι = Dor. φέροντι, &c.

IV. When two consonants come together, the second is often made *like* the first. Thus initial δγ becomes dz, written ζ, as in Ζεύς = Skr. *dyáus*, Osk. ΔιουΦει (dat.), O. L. *Dionis*; ζα = διά in Hom. Ζάθεος, Ζάκοτος, &c., also in the Æolic forms ζαβάλλειν, ζὰ νυκτός, Ζόννυξος = Διόνυσος, &c. Medial δγ very frequently becomes ζ, as in ἔζομαι, R. ἔδ; ὕζω, R. ὀδ; σχίζω, R. σχιδ; χέζω, R. χεδ; τράπεζα for τετραπεδγα, compare L. *acurpedius*; χάλαζα from St. χαλαδ, I. E. *ghrád*, Skr. *hráduni* (bad weather), L. *grando*; ρίζα = Φριδγα, πιζός = πεδγος; Æol. κάρζα = καρδία; -ζος in χθιζός and πρωίζος, from R. διF, whence come δίαλος, δέελος, δηλος, &c.; ἀριζήλος = ἀριδγηλος from R. διF.

V. Mutual approximation of two united consonants to each other. Thus γγ becomes ζ through the step δγ in ῥέζω = ῥεγγω beside ἔργον; μείζων = μεγγων; ἄζομαι = ἀγγομαι beside ἄγιος; Hom. ὑπολίζων = ὑπολιγγων; μάζα beside μάγειρος; φύζα = φυγγα, R. φυγ; ζάω = γγaw, I. E. *ghr*, Skr.

*g'iv* (to live), beside *δίαιτα* = *γγαίτα*; *κλάζω* beside *κλαγγή*; *ρίζω* (I dye) beside *ρήγέυς* (a dyer); and some other verbs in *-ζω*. *Z* = *βγ* in *λάζομαι* beside *R. λαβ*, *ἐλαβον*. In *νίζω* beside *χέρ-νιβ-ος*, *νίπτω* for *νιβτω*, *ζ* may represent *γγ*, as the *Skr. nīg'* (to wash), proves that the root once contained *γ*. *Σσ* = *τγ* in *λίσσομαι*, *R. λιτ*; *μέλισσα* from *St. μελιτ*; *Κρησσα* = *Κρητγα*; *ἐρέσσω* = *ἐρετγω* beside *ἐρετμός*; *κρείσσω* = *κρειτγων* beside *κράτιστος*; *νῆσσα* = *νητγα*, *L. σιας*. *Σσ* = *θγ* in *Hom. μέσσοις* = *Skr. madhyas*; *βάσσω* = *βυθων* beside *βαθύς*; *κορύσσω* = *κορυθγω* beside *κεκόρυθμαι*. *Σσ* = *κγ* in *ῆσσω* = *ήκγων* beside *ἥκιστος*; *Θρησσα* = *Θρηκγα*; *μαλάσσω* = *μαλακγω* beside *μαλακός*; *ὄσσε* (the eyes) = *ὄκγε* beside *Bæot. ὄκταλλος* (the eye), and *ὄκκος* (the eye, *Hesych.*); *ὄσσα* (a voice) = *ὄκγα*, *L. vox*; *ἐνίσσω* (I attack, = *ἐνίπτω*) = *ἐνικγω*, *L. ico*. *Σσ* = *χγ* in *ἐλάσσω* = *ελαχγων* beside *ελαχύς*; *βράσσω* = *βραχγων* beside *βραχύς*, *βρύσσονος βραχυτέρου*, *Hesych.* (*Ahrens, "De Dial. Dor.," p. 505*). *Σσ* = *βγ* in *φάσσα* (the ring dove) = *φαβγα*, beside *φάψ* (a smaller species of ring dove). *Σσ* = *πγ* in *κόσσοις* (a slap in the face) *κοπγος* from *R. κοπ*. *Σσ* = *δγ* in *Æol. πέσσουν* = *πεδίον*; *Æol. ἴσσοις* = *ἴδιοις*; *Tar. φράσσω* = *φράζω* from *R. φραδ* (whence *ἀριφραδής*, *πέφραδον*), which *Curtius* deduces from an older form *πρατ* = *L. pret* in *interpretari*, beside *Lith. prat* (to understand), *Goth. frathis* (understanding). *Σσ* = *γγ* in *πήσσω* = *πηγγω* beside *πήγνυμι*; *φράσσω* = *φραγγω* beside *ἐφράγην*; *ρήσσω* = *ρήγγω* beside *ρήγνυμι*; *ἄσσω* = *ἄγγω* beside *ἄγνυμι*; *φρύσσω* (I parch) = *φρυγγω* beside *φρύγω*; *πλήσσω* = *πληγγω* beside *ἐπλάγην*; *ὀρύσσω* = *ὀρυγγω* (beside *ὀρυγί*) or *ὀρυχγω*; *μάσσω* = *μαγγω* beside *μαγέυς* (a baker); *τάσσω* = *ταγγω* beside *ταγός* (a ruler); and perhaps in a few other cases. In all those, however, which are enumerated here, with the exception of *ἄσσω* (which does not appear till after Augustus), *φρύσσω*, and *τάσσω*, older forms of the roots occur with *κ* instead of *γ*, so that in these cases *σσ* may represent *κγ*, and not *γγ*. •

## §. 59. DISSIMILATION.

Mute dentals before mute dentals become  $\sigma$ , as in  $\acute{\alpha}\nu\nu\sigma\acute{\tau}\acute{o}\varsigma$  =  $\acute{\alpha}\nu\nu\tau\tau\omicron\varsigma$  from  $\acute{\alpha}\nu\acute{\upsilon}\tau\omega$ ;  $\acute{\alpha}\sigma\tau\acute{\epsilon}\omicron\nu$  =  $\acute{\alpha}\delta\tau\epsilon\omicron\nu$  from  $\acute{\alpha}\delta\omega$ ;  $\pi\epsilon\iota\sigma\theta\eta\nu\alpha\iota$  =  $\pi\epsilon\iota\theta\theta\eta\nu\alpha\iota$  from  $\pi\epsilon\acute{\iota}\theta\omega$ . The ending  $\theta\iota$  of the 2 sing. imperative, first aorist passive, becomes  $\tau\iota$  when an aspirate occurs in the preceding syllable, as  $\sigma\acute{\omega}\theta\eta\tau\iota$  beside  $\kappa\lambda\acute{\upsilon}\theta\iota$ : we find, however,  $\phi\alpha\theta\acute{\iota}$  or  $\phi\acute{\alpha}\theta\iota$  from  $\phi\eta\mu\acute{\iota}$ . We have also  $\acute{\epsilon}\tau\acute{\upsilon}\theta\eta\nu$  =  $\acute{\epsilon}\theta\upsilon\theta\eta\nu$ , from R.  $\theta\upsilon$  and  $\acute{\epsilon}\tau\acute{\epsilon}\theta\eta\nu$  =  $\acute{\epsilon}\theta\epsilon\theta\eta\nu$  from R.  $\theta\epsilon$ ; yet we find  $\acute{\epsilon}\phi\upsilon\phi\acute{\eta}$  (the woof) from R.  $\acute{\upsilon}\phi$ . When two consonants begin a root, the first is only kept in reduplicated syllables, hence aspirates are reduplicated by the corresponding tenues. Thus we have  $\gamma\acute{\epsilon}\gamma\rho\alpha\phi\alpha$  =  $\gamma\rho\epsilon\gamma\rho\alpha\phi\alpha$ ,  $\kappa\acute{\iota}\chi\rho\eta\mu\iota$  =  $\chi\rho\iota\chi\rho\eta\mu\iota$ ,  $\acute{\iota}\sigma\tau\eta\mu\iota$  =  $\sigma\iota\sigma\tau\eta\mu\iota$  =  $\sigma\tau\iota\sigma\tau\eta\mu\iota$ ,  $\pi\acute{\epsilon}\phi\upsilon\kappa\alpha$  =  $\phi\epsilon\phi\upsilon\kappa\alpha$ : similarly in Sanskrit we have *babhūva* = *πέφυκα*, *dadráma* = *δέδρομα*.\* Roots which originally began with one aspirate, and ended with another, replaced the first aspirate by the corresponding tenuis. Thus we have  $\pi\acute{\eta}\chi\upsilon\varsigma$  (the arm) =  $\phi\eta\chi\upsilon\varsigma$  = I. E. *bhághus* = Skr. *báhus* (the arm), beside O. N. *bógr*, O. H. G. *buoc*;  $\pi\upsilon\theta\mu\acute{\eta}\nu$  beside  $\beta\upsilon\theta\mu\acute{\eta}\nu$ , Hesych. (the bottom) =  $\phi\upsilon\theta\mu\eta\nu$ , Skr. *budhna* (the bottom) = I. E. *bhudhna*, beside O. H. G. *bodam*, L. *fundus*; &c.† We see the effects of Dissimilation in other languages as in L. *Parilia* beside *Palilia* from *Pales*, L. *meridies* from *medidies*, L. *popularis* for *populalis* beside *regalis*, &c.; It. *veleno* = L. *venenum*; E. *cinnamon* for *cinnamom*, &c.

\* Curtius has pointed out that Sanskrit, Greek, and Latin had not, before their separation from each other, already fixed their peculiar laws of reduplication, from the different ways in which they treat groups of consonants of which the first is a sibilant. Thus we have the Latin *steti* = *stesti*, *spopondi* = *spospondi*, while conversely the Sanskrit has only kept the sibilant in the second syllable, as *tishtëmi* (I stand). We find some traces of this latter kind of reduplication in Greek and Latin, as in *quisquilæ* = *κοσκυλλάρια* (parings of leather) beside *σκόλλειν* (to flay) and *κασκαλίζειν* (to tickle) beside *σκάλλειν* (to stir up). A third form of reduplication is found in L. *sisto* = *stisto*, as *ίστημι* = *στιστημι*.

† For other examples consult Grassmann in K. Z., vol. xv, p. 114.

## §. 60. THE REJECTION OF A CONSONANT.

Dentals, when standing before  $\sigma$ ,\* are generally dropped without compensation, as in  $\acute{\alpha}\nu\upsilon\sigma\iota\varsigma$  =  $\acute{\alpha}\nu\nu\tau\sigma\iota\varsigma$ ,  $\eta\sigma\omicron\mu\alpha\iota$  =  $\eta\delta\sigma\omicron\mu\alpha\iota$ ,  $\kappa\acute{\omicron}\rho\upsilon\sigma\iota$  =  $\kappa\omicron\rho\nu\theta\sigma\iota$ ,  $\delta\alpha\acute{\iota}\mu\omicron\sigma\iota$  =  $\delta\alpha\iota\mu\omicron\nu\sigma\iota$ . N also disappears before  $\zeta$ , as in  $\sigma\acute{\upsilon}\zeta\upsilon\gamma\omicron\varsigma$  =  $\sigma\nu\zeta\upsilon\gamma\omicron\varsigma$ . N in  $\acute{\epsilon}\nu$  is never lost;  $\nu$  in  $\pi\acute{\alpha}\nu$  and  $\tau\acute{\alpha}\lambda\iota\nu$  is either kept, or assimilated to the following  $\sigma$ ;  $\nu$  in  $\sigma\nu\nu$  is dropped before  $\zeta$  and  $\sigma$  with a consonant following, but before a single  $\sigma$  it is assimilated, as in  $\sigma\nu\sigma\acute{\sigma}\iota\tau\iota\omicron\nu$ . In some cases the loss of  $\nu$  is compensated for by lengthening the preceding vowel, as in  $\mu\acute{\epsilon}\lambda\alpha\varsigma$  =  $\mu\epsilon\lambda\alpha\nu\varsigma$ ,  $\tau\acute{\alpha}\lambda\alpha\varsigma$  =  $\tau\alpha\lambda\alpha\nu\varsigma$ , &c. N $\tau$ ,  $\nu\theta$ ,  $\nu\delta$ , are also omitted before  $\sigma$ , but are nearly always compensated for, as  $\tau\iota\theta\epsilon\acute{\iota}\varsigma$  =  $\tau\iota\theta\epsilon\nu\tau\varsigma$ ,  $\pi\epsilon\acute{\iota}\sigma\omicron\mu\alpha\iota$  =  $\pi\epsilon\nu\theta\sigma\omicron\mu\alpha\iota$ ,  $\sigma\pi\epsilon\acute{\iota}\sigma\omega$  =  $\sigma\pi\epsilon\nu\delta\sigma\omega$ . N is also sometimes omitted between two vowels, as in  $\mu\epsilon\acute{\iota}\zeta\omicron\upsilon\varsigma$  =  $\mu\epsilon\acute{\iota}\zeta\omicron\nu\epsilon\varsigma$ . K is lost in  $\sigma\upsilon\lambda\acute{\alpha}\omega$  from  $\sigma\kappa\tilde{\upsilon}\lambda\omicron\nu$  (plunder), as in Skr. *savyas* (left) =  $\sigma\kappa\alpha\acute{\iota}\omicron\varsigma$ , L. *scævus*;  $\sigma\acute{\upsilon}\nu$  =  $\xi\acute{\upsilon}\nu$ ; Kypr.  $\sigma\omicron\acute{\alpha}\lambda\alpha$  =  $\xi\upsilon\eta\lambda\eta$  (a carpenter's plane), from  $\xi\acute{\upsilon}\omega$ .  $\Pi$  is lost in Dor.  $\acute{\alpha}\sigma\epsilon\kappa\tau\omicron\varsigma$  ( $\acute{\alpha}\gamma\alpha\theta\omicron\varsigma$  παρὰ Ῥίνθωνι Ταραντίνῳ) =  $\acute{\alpha}\psi\epsilon\kappa\tau\omicron\varsigma$  from  $\psi\acute{\epsilon}\gamma\omega$ ;  $\sigma\acute{\iota}\tau\tau\alpha\kappa\omicron\varsigma$  =  $\psi\acute{\iota}\tau\tau\alpha\kappa\omicron\varsigma$  (a parrot); Ion.  $\sigma\acute{\omega}\chi\epsilon\iota\nu$  =  $\psi\acute{\omega}\chi\epsilon\iota\nu$  (to scrape);  $\acute{\alpha}\mu\mu\omicron\varsigma$  =  $\psi\acute{\alpha}\mu\mu\omicron\varsigma$  through  $\sigma\alpha\mu\mu\omicron\varsigma$ . T is lost in  $\kappa\acute{\epsilon}\rho\omega\varsigma$  =  $\kappa\acute{\epsilon}\rho\alpha\tau\omicron\varsigma$ , from St.  $\kappa\epsilon\rho\alpha\tau$  (a horn);  $\phi\acute{\epsilon}\rho\epsilon\iota$  =  $\phi\epsilon\rho\epsilon\tau\iota$ , &c. The rejection of  $y$  and F has been already noticed; we may add that F is lost in  $\sigma\omicron\mu\phi\acute{\omicron}\varsigma$  (spongy), beside Goth. *svamm*s (a sponge);  $\sigma\acute{\omicron}\beta\eta$  (a horse's tail), beside O. N. *svipa* (a tail);  $\sigma\iota\gamma\acute{\eta}$  beside G. *schweigen* (silence);  $\sigma\acute{\iota}\delta\eta\rho\omicron\varsigma$  beside Skr. *svidita* (molten);  $\sigma\acute{\alpha}\lambda\omicron\varsigma$  (swell of the sea) beside E. *swell*;  $\Sigma\epsilon\acute{\iota}\rho\iota\omicron\varsigma$ ,  $\sigma\acute{\iota}\lambda\alpha\varsigma$  beside Skr. *svar* (heaven), Z. *hvar*e (the sun).  $\Sigma$ , as we have already seen, is generally rejected between two vowels; also between two consonants, as in  $\gamma\epsilon\gamma\rho\acute{\alpha}\phi\theta\alpha\iota$  =  $\gamma\epsilon\gamma\rho\alpha\phi\sigma\theta\alpha\iota$ ,  $\tau\acute{\epsilon}\tau\nu\phi\theta\epsilon$  =  $\tau\epsilon\tau\nu\phi\sigma\theta\epsilon$ , &c.; also before another  $\sigma$ , as in  $\gamma\lambda\upsilon\kappa\acute{\epsilon}\sigma\iota$  =  $\gamma\lambda\upsilon\kappa\epsilon\sigma\sigma\iota$  for  $\gamma\lambda\upsilon\kappa\epsilon\sigma\text{F}\iota$ , &c. Initial  $\sigma$  is always lost before  $\nu$ , as in  $\nu\acute{\iota}\phi\alpha$  beside Z. *s'nizh* (to snow), Goth. *snaiws* (snow);  $\nu\epsilon\ddot{\upsilon}\rho\omicron\nu$ , L. *nervus* beside O. H. G. *snuor* (laqueus);  $\nu\acute{\epsilon}\omega$  (Fswim) =  $\sigma\nu\epsilon\text{F}\omega$ , Hom.  $\acute{\epsilon}\nu\nu\epsilon\omicron\nu$  =  $\acute{\epsilon}\sigma\nu\epsilon\omicron\nu$ ,  $\nu\epsilon\ddot{\upsilon}\sigma\iota\varsigma$  (swimming), beside Skr. *snu* (to

flow); *νάω* (I flow) = *σναῶ*, *Æol.* *ναύω*, beside *Skr.* *snu* (to flow), and not *sná* (to flow) as the *Æolic* form shows; *νυός* (daughter-in-law) = *σνυρος*, beside *Skr.* *snushá*, and *L.* *nurus*. It is sometimes lost before *μ*, as in *μειδιάω* beside *φιλομμειδής*, *Skr.* *smi* (to smile), *E.* *smile*; *μέλδω* (I melt), *E.* *smelt*; *μέρμερος* (care-laden), *L.* *memor*, beside *Skr.* *smar* (to remember); *μύδος* (damp, foulness), *Skr.* *mid* (to be clammy), *Goth.* *bis-meitan* (*ἐπιχρίειν*), *O. H. G.* *smiz* (*nævus*), and *E.* *smut*. *Σ* is lost before *κ* in *κάρφος* (a twig) = *σκάριφος*; *κίμψαντες* (*ἐρείσαντες*, *Hesych.*), beside *σκίμπτειν* (to trip), *L.* *scipiti* (staff); *κνίψ* (a small insect) = *σκνίψ*; *καρθμοί* (*κινήσεις*, *Hesych.*), beside *σκαίρειν* (to hop); *κάπετος* (a grave) = *σκάπετος*, beside *σκάπτειν* (to dig); *κίδνασθαι* = *σκίδνασθαι* (to be scattered); *σκῦτος* (skin) = *κύτος*, *Skr.* *sku* (to cover). *Σ* is lost before *π* in *πένουμαι* (I work, am poor), from *R.* *σπεν*, beside *σπάνις* (want), *G.* *spinnen* (to spin, to do); *πένος* (dirt), beside *σπίλος* (stain); and before *φ* in *φηλός* (deceitful), beside *σφάλλω*. *Σ* is lost before *τ* in *ταῦρος* *Goth.* *stiu\** (bull); *τέγος* = *στέγος*, *Skr.* *sthaḡámi* = *στέγω*, *L.* *tego*, *Lith.* *stogas* (roof), *O. N.* *thek* (roof), *O. H. G.* *dakju* (I cover); *Τυδεύς*, from *R.* *τυδ* = *Skr.* *tud* (to strike), *L.* *tundo*, *tudes* (a hammer), beside *Goth.* *stauta* (I strike); *τύπτω* beside *στυπάζει* (*ὠθεῖ*, *Hesych.*), *O. H. G.* *stumbalôn* (obtundere); *τυρβάζειν* = *στυρβάζειν* (to trouble), *G.* *sturm*, *stürzen* (to rush).

### §. 81. THE INSERTION OF A CONSONANT.

The groups *νρ*, *μρ*, *μλ*, become *νδρ*, *μβρ*, *μβλ*: thus *ἀνδρός* = *ἀνρος*; *μεσημβρία* = *μεσημρια*; *μέμβλωκα* = *μεμλωκα*, and *βλώσκω* = *μβλωσκω* for *μλωσκω*, beside *μολεῖν* (to go); *βροτός* = *μβροτος* (found in *ἄμβροτος*) for *μροτος* = *Skr.* *martas* (mortal); *γαμβρός* = *γαμρος*, *L.* *gener*; *βλίττω* (I take the

\* The Vedic *sthûras* (nom. sing. masc.) is an adj. meaning *strong*; it never means a *bull*.

honey) = *μβλιττω* for *μλιττω* from *μέλι*; *βλάξ* (lazy), beside *μαλακός*; *ἡμβροτον* = *ἡμαρτον*. In these cases *β* and *δ* were inserted to facilitate the pronunciation; consult §. 30. *N* is inserted in the root syllable of the present tenses of many verbs, as in *λαγχάνω*, *μανθάνω*, &c., beside *λαχεῖν*, *μαθεῖν*, &c. This *ν* was originally the sign of the present tense, and is found in its full form *νν* in *δείκνυμι*, &c. Similarly we have Skr. *s'aknōmi* (I can), *s'aknumas* (we can), from R. *s'ak*, *yūñ-g'anti* (they bind), from R. *yug'*, &c., and in L. *jungunt* from R. *jug*, *tundo*, from R. *tud*, &c. *Y* frequently assumed before it the sound of *δ*, which when initial became *ζ*, and when preceded by a tenuis became *τ*, while the *y* was dropped. Thus *ζεύγνυμι* = *δγευγνυμι* = Skr. *yunaḡmi* (I join), L. *jungo*, &c.; similarly in Italian we have *giacere* for *diacere* = L. *jacere*, *giocondo* for *diocondo* = L. *jucundus*, &c.; consult §. 56. We have *χαλέπτω*\* from *χαλεπός*, through the steps *χαλεπδῶ*, *χαλεπω*; similarly we may derive *τύπτω* from R. *τυπ*, *κλέπτω* from R. *κλεπ*, &c. In *βλάπτω* from R. *βλαβ* we might expect *βδ* in place of *πτ*; but, as the verbs in *-πτω* were so numerous, this case was assimilated to the others; unless, indeed, the root be *βλαπ*, found in Kret. *ἀβλόπες* = *ἀβλαβές*. *Νίπτω* from R. *νιβ*, Skr. *nig'* does not occur till very late. Perhaps we may in this way explain the forms *πτόλις*, *πτόλεμος*, &c.; *πτόλις* = *πγολις*; *πτόλεμος* = *πγολεμος*; *πίσσω* beside Skr. *pish* (to pound), L. *pinso*; *πτέρνα* (the heel), beside Skr. *pārshni* (the heel); *πτύω* beside Goth. *speiva* (I spit), L. *spuo*; *κτείνω* beside *καίνω*; *πταίω* (I make to fall), beside *παίω* (I strike); *βδέω* = *βγεω* beside L. *visium* (*βδέσμα*), Lith. *bezdu* (*βδέω*); *χθές* = I. E. *ghyas*, whence Skr. *hyas* (yesterday), L. *heri*; *χθαμαλός* beside *χαμαί*.

\* Lottner considers *τ* in these cases to be the sign of a presential form, lost in Skr. but kept in Gr., Lat., and Lith.

## §. 62. ASPIRATION.

Although most of the Greek aspirates represent the I. E. soft aspirates, yet under certain circumstances we find an aspirate developed from an original tenuis, after the Greek had separated from the other cognate languages. The two chief conditions for this development of an aspirate from the corresponding tenuis are, firstly, the influence of a preceding  $\sigma$ ; and, secondly, that of a following  $\lambda$ ,  $\mu$ ,  $\nu$ , or  $\rho$ . In the following cases we find the aspirate due to the influence of a preceding  $\sigma$ :  $\sigma\chi\acute{\iota}\zeta\omega$ , Skr. *k'hid* (to cut), L. *scindo*, Goth. *skaida* (I separate); Att.  $\sigma\chi\acute{\epsilon}\lambda\iota\varsigma = \sigma\kappa\acute{\epsilon}\lambda\iota\varsigma$  (the ham);  $\acute{\alpha}\sigma\phi\acute{\alpha}\lambda\alpha\acute{\xi} = \acute{\alpha}\sigma\pi\acute{\alpha}\lambda\alpha\acute{\xi}$  (mole); Att.  $\sigma\phi\upsilon\rho\acute{\iota}\varsigma = \sigma\pi\upsilon\rho\acute{\iota}\varsigma$  (basket); Att.  $\sigma\phi\omicron\nu\delta\acute{\upsilon}\lambda\eta = \sigma\pi\omicron\nu\delta\acute{\upsilon}\lambda\eta$  (insect), &c. This influence of  $\sigma$  is very common in Attic.  $\Sigma$  sometimes was dropped after it had aspirated the following consonant, as in  $\tau\rho\acute{\upsilon}\chi\omega$  (I wear out) =  $\tau\rho\acute{\upsilon}\sigma\kappa\omega$  (Hesych.);  $\nu\acute{\eta}\chi\omega = \sigma\upsilon\eta\sigma\kappa\omega$ ;  $\gamma\lambda\acute{\iota}\chi\omicron\mu\alpha\iota$  (I long for), beside  $\gamma\lambda\acute{\iota}\sigma\chi\rho\omicron\varsigma$  (sticky);  $\pi\tau\omega\chi\acute{\omicron}\varsigma$ , beside  $\pi\tau\omega\sigma\kappa\acute{\alpha}\zeta\omega$  (I crouch);  $\epsilon\rho\chi\omicron\mu\alpha\iota = \epsilon\rho\sigma\kappa\omicron\mu\alpha\iota$ , &c.  $\Lambda$ ,  $\mu$ ,  $\nu$ ,  $\rho$  aspirate the preceding consonants in  $\acute{\alpha}\nu\delta\rho\acute{\alpha}\chi\lambda\eta$  (a coal pan), from St.  $\acute{\alpha}\nu\theta\rho\alpha\kappa$  (coal);  $\nu\alpha\upsilon\sigma\theta\lambda\acute{\omega}\omega$  (I carry by sea) =  $\nu\alpha\upsilon\sigma\tau\omicron\lambda\acute{\epsilon}\omega$ ; suffix  $-\theta\lambda\omicron$  ( $\theta\acute{\epsilon}\mu\epsilon-\theta\lambda\omicron\nu$ ) =  $-\theta\rho\omicron$ ,  $-\tau\rho\omicron$ ;  $\sigma\iota\phi\lambda\acute{\omicron}\varsigma$  (crippled) =  $\sigma\iota\pi\alpha\lambda\acute{\omicron}\varsigma$ ;  $\alpha\acute{\iota}\chi\mu\acute{\eta} = \acute{\alpha}\kappa\mu\acute{\eta}$ ;  $\iota\omega\chi\mu\acute{\omicron}\varsigma$  (pursuit), beside  $\iota\omega\kappa\acute{\upsilon}$ ;  $\lambda\alpha\chi\mu\acute{\omicron}\varsigma$  (kicking) beside  $\lambda\alpha\kappa\tau\iota\sigma\mu\acute{\omicron}\varsigma$ ;  $\lambda\acute{\upsilon}\chi\nu\omicron\varsigma$  from R.  $\lambda\upsilon\kappa$ ;  $\acute{\epsilon}\xi\alpha\acute{\iota}\phi\omicron\nu\eta\varsigma = \acute{\epsilon}\xi\alpha\pi\acute{\iota}\nu\eta\varsigma$ ;  $\beta\lambda\eta\chi\rho\acute{\omicron}\varsigma$  (sluggish), beside  $\beta\lambda\acute{\alpha}\xi$ ; suffix  $-\theta\rho\omicron$  ( $\kappa\lambda\epsilon\acute{\iota}-\theta\rho\omicron\nu$ ) =  $-\tau\rho\omicron$  ( $\acute{\alpha}\rho\omicron\tau\rho\omicron\nu$ ), &c.;  $\tau\acute{\epsilon}\phi\rho\alpha$  (ashes), beside Skr. *tap* (to be warm) L. *tepidus*;  $\theta\rho\acute{\iota}\nu\alpha\acute{\xi}$  (a three-pronged fork) =  $\tau\rho\acute{\iota}\nu\alpha\acute{\xi}$ ;  $\phi\rho\acute{\omicron}\acute{\iota}\mu\iota\omicron\nu$  from older  $\pi\rho\omicron\omicron\acute{\iota}\mu\iota\omicron\nu$ , &c. Sometimes the same effect is due to a preceding nasal, as in  $\acute{\epsilon}\gamma\chi\omicron\varsigma$  beside  $\acute{\alpha}\kappa\omega\nu$ ;  $\rho\acute{\acute{\epsilon}}\gamma\chi\omega = \rho\acute{\acute{\epsilon}}\gamma\kappa\omega$  (I snore);  $\sigma\pi\iota\nu\theta\acute{\eta}\rho$  (spark), beside L. *scintilla*;  $\delta\mu\phi\acute{\eta}$  (voice) from R.  $\text{F}\epsilon\pi$ ; Bœot.  $\acute{\epsilon}\chi\omega\nu\theta\iota = \acute{\epsilon}\chi\omicron\upsilon\sigma\iota$ , from  $\acute{\epsilon}\chi\omicron\nu\tau\iota$ , &c. We have also a few isolated examples where a Greek aspirate represents an older tenuis, without being influenced by  $\lambda$ ,  $\mu$ ,  $\nu$ ,  $\rho$  or  $\sigma$ , as in  $\tau\alpha\chi\acute{\omicron}\varsigma = \text{Skr. } takus$

(quick); ἐννύχιος from St. νυκ; ἀλείφω beside λίπος (fat), Skr. *lip* (to anoint); κεφαλή beside κεβάλη (Hesych.), Skr. *kapāla* (skull); κεκαφῶς (gasping), beside καπύω (I gasp), and a few other cases.

### §. 63. FINAL CONSONANTS.

N, ρ, and ζ are the only consonants allowed to end a word. The only exceptions to this rule are ἐκ (from ἐξ), οὐκ (from οὐκι), and the interjections ὦπ, ὄπ, ἰόφ. A final τ and δ are dropped, or τ is changed into ζ, as in τό = Skr. *tad*; ἔφν = Skr. *abhut*; ἔφερον = Skr. *abharant*; τέρας for τερατ, &c. Final θ becomes ζ, as in δός for δοθ from δοθι, θές for θεθι, σχές for σχεθι. Δ is lost in παῖ, voc. of παῖς, St. παιδ; also κ in γύναι, voc. of γύνη, St. γυναικ; also κτ in ἄνα, voc. of ἄναξ, St. ἀνακ, &c. When several consonants, the last of which is ζ, come together, only one is generally retained, and the preceding vowel is lengthened in compensation, as in φέρων = φεροντς; ποιμήν = ποιμενς; εὐμενής = εὐμενες; σκῶρ = σκαρτς; γίγᾱς = γιγαντς; μέλᾱς = μελανς; τετυφῶς = τετυφοτς; τιθείς = τιθεντς; διδούς = διδοντς, &c. We sometimes find, as final sounds, the combinations γξ, ρξ, ψ, as in φόρμιγξ, λάρυγξ, σάρξ, δόρξ, (gazelle), ὕψ, ὦψ, ἄψ, &c. We have λς in the single case ἄλς; ρς in Æol. forms, as μάκαρς; νς only in ἑλμινς (worm), πείρινς (wicker basket), but more frequently in the Argive and Kretan dialects, as Τίρυνς, ἐνς = εἰς, τόνς = τούς, ἀγρόνς = ἀγρούς, &c. Final μ is dropped or changed into ν, as in πόσιν = Skr. *patim*; νέον = Skr. *navam*; ἔφερον (1 sing.) = Skr. *abharam*; δέκα = L. *decem*; πατέρα = L. *patrem*; ἔδειξα = Skr. *adiksham*; φέρω = Skr. *bharāmi*. The ν ἐφέλκυστικόν in ἔφερεν = Skr. *abharat*, ποσσίν, &c., is peculiar to the Greek language. Schleicher is wrong in treating ν in φέρομεν (1 pl.) &c., as this ν; for the Dor. φέρομες and the common φέρομεν both point back to an older φερομενς.

## CHAPTER VI.

## THE LATIN ALPHABET.

## §. 64. TABULAR VIEW OF THE SOUNDS.

| MUTES.            |          | SEMIVOWELS. |          |                  | VOWELS.                     |
|-------------------|----------|-------------|----------|------------------|-----------------------------|
| unasp.            |          | Spirants.   | Nasals.  | r & l-sounds.    |                             |
| surd.             | son.     | surd.       | son.     | son.             |                             |
| Gutt. <i>c, q</i> | <i>g</i> | <i>h</i>    | <i>n</i> |                  | <i>a, ā</i> } <i>e, ē</i> } |
| Pal.              |          | <i>j</i>    |          |                  | <i>i, î</i> }               |
| Cer.              |          |             |          | ( <i>r, l</i> )? |                             |
| Dent. <i>t</i>    | <i>d</i> | <i>s</i>    | <i>n</i> | <i>r, l</i>      | <i>o, ō</i>                 |
| Lab. <i>p</i>     | <i>b</i> | <i>f</i>    | <i>m</i> |                  | <i>ū</i>                    |

The Romans borrowed their alphabet from the Dorians of Cumæ, omitting the three aspirates,  $\theta$ ,  $\phi$ ,  $\chi$ , as they did not possess the corresponding sounds. Their alphabet consisted, therefore, of the following letters, in the given order : *a, b, c, d, e, f, z, h, i, k, l, m, n, o, p, q, r, s, t, v, x*. *Z* is still found in a fragment of the *Carmen Saliare*; but it was soon lost, and was not employed again by the Romans till it was reintroduced in Cicero's time to represent Gr.  $\zeta$  in borrowed words, at which period also  $\gamma$  was introduced, as well as the custom of marking the Greek aspirates,  $\theta$ ,  $\phi$ ,  $\chi$ , by *th, ph, ch*. *Q* is the Doric Koppa. *X* appears at the end of the alphabet, because it was not introduced as early as the other letters, *cs* or *gs* being used for it. It must have been adopted, however, before the archonship of Eukleides, for after his time the Greeks used the sign  $\Xi$ . The oldest document in which *X* is found is the *Senatus Consultum de Bacchanalibus*. Some time after the introduction of the Doric Alphabet at Rome the distinction between the guttural tenuis and media was lost there, as well as in Etruria and Umbria, and *C* and *K* repre-

sented the same sound.\* Thus on the Columna Rostrata *c = g* in such forms as *leciones*, *pugnandod*, &c. This force of *c* was still retained in the abbreviations *C.* and *Cn.* for *Gaius* and *Gnæus*. *K* at last was only used in certain cases, as when the words *Kæso*, *Kalendæ*, *Kalumniæ*, *Kaput*, were marked by the first letter merely. After *k* had thus been almost lost, the Romans felt that a distinction should be made between the guttural *tenuis* and *media*; and, to represent the latter, *G* was introduced by Sp. Carvilius, a freedman of Sp. Carvilius Ruga, and was placed by him between *f* and *h*, in the place of the old *z*. The Emperor Claudius attempted to introduce three new signs—the inverted Digamma  $\beth$  for *v*, Anti-sigma  $\sigma$  for *bs* or *ps*, and the sign of the Greek spiritus asper  $\text{̑}$  for *û*. This attempt, however, failed, for after his death these signs at once were given up. The sounds of the Latin language are not so far removed as those of the Greek from those of the Indo-European; for, while Greek has changed *u* into *û*, altered the three aspirates from *mediæ* to *tenues*, lost *y* entirely, *v* nearly entirely, and nearly always lost or changed *s* into the spiritus asper before vowels, Latin, on the other hand, has kept the pure *u*, *y*, *v*, *s*, although *y* and *v* sometimes disappear, and *s* between two vowels becomes *r*, but represents the three original aspirates by *f*, or when medial by *b*, and also the I. E. *gh* by *h*. The vowel-system is, however, very far removed from the I. E.; for the distinctions of *guna* and *vrddhi* have been almost lost; the effects of assimilation and dissimilation are very great; nearly all the old diphthongs have disappeared in classical Latin and Umbrian, and non-original lengthenings and shortenings of vowels continually occur. The old diphthongs are found in old Latin and Oscan, but these have been handed down in too fragmentary a state to be of much assistance. The substitution of monophthongs for

This is Corssen's view, but it appears to be only a theory invented to account for the fact that the third letter of the Latin Alphabet has a *k*-sound.

diphthongs is easily explained, from the assimilation of one sound to the other, *ei* becoming *i*, &c. ; or from the mutual approximation of both to each other, *ai* becoming *æ*, &c.

### §. 65. PRONUNCIATION OF THE VOWELS.

A had in classical Latin the full clear sound of the Italian *a*. Long and short *e* had each two different sounds: *ē* in *intēr*, *patēr*, &c., sounded like *e* in E. *father*; *ĕ* in *tempestatēbus*, *merĕto*, &c., had an *i*-sound,\* and was supplanted by *i* in the language of the educated classes, but finally returned to *e* in the language of the common people; *ē* had an *æ*-sound, as we see from the O. L. forms *quēstores*, *Vīctoriē*, &c., and the ordinary forms *fēcundus*, *fĕnum*, &c.; *ĕ* had an *i*-sound, which was anciently written *ei*, and which Quintilian notices (I. 4, 18, "in here neque *e* plane neque *i* auditur"). Short *i* had a thin *i*-sound; but in vulgar Latin in early times it was generally pronounced *e*, to which sound it also returned in the later Empire. The Oscan had an *i*-sound, for which they used the sign **𐌿**, and which was probably the same as the Fr. *é fermé*. Long *i* had a thin *i*-sound, and a broad *e*-sound, which was written *ei*. In Latin there also existed a sound between *i* and *u*, equivalent to the Gr. *υ*, for which Claudius introduced the sign **𐌶**. This sound was generally found before labials, as in *maxīmus*, *volūmus*, &c. It approached nearer to *u* than to *i*, inasmuch as the oldest inscriptions generally present *ū*. The Claudian **𐌶** is only found on inscriptions, in place of Gr. *υ*, as in *Aeg𐌶ti*, *Clēnus*, &c., except once for Gr. *ι*, in *𐌶𐌶b* (*liothecca*), and once in L. *g𐌶bernator*, on account of its relationship to Gr. *κυβερνήτης*. This sound generally became *i* in Italian, as *massimo*, &c.; yet we find it kept as *u* in It. *documento* and *monumento*. *O* had a clear sound in *colo*, *honestus*, &c., and an obscure one in termination *-os*, later *-us*, *plostrum*, &c. The L. *u* is a true *u*, and not the same as the Gr. *υ*; for the Greeks

\* Of course I mean the Italian, and not the English *i*.

generally transcribed it by *ou*, as in *Κορβούλων*, *Νουμάς*, &c., and in some few cases by *o* and *u*, as in *Ποπλικόλας*, *Φανσύλος*, &c. This proves that the L. *u* was equivalent to neither Gr. *o* nor *u*, but that it lay between these sounds. That the Gr. *υ* had not the same sound as the L. *u* is also shown by the fact, that on inscriptions before the time of Augustus Gr. *υ* is represented by L. *i*, as in *Stigio* for *Στυγιώ*, and *Sisipus* for *Σίσυφος*, and that they naturalized Gr. *Υ* in their transcription of Greek words. In later Latin also Gr. *υ* was pronounced as *i*; thus we have *simbolo*, *gimnasio*, &c., whence come It. *simbolo*, *ginnasio*, &c.

#### §. 66. PRONUNCIATION OF THE SEMIVOWELS.

*II* is a soft spirant, though traces of a hard *h* are found in *veri* and *traxi* from *veho* and *traho*. It seems to be hard before *t*, in the Umbrian forms *ahtu* beside L. *acto*, *rehte* = L. *recte*, *screihtor* = L. *scripti*, beside Osc. *scritas* = L. *scriptæ*, &c., though even in these it may scarcely have been heard in pronunciation; for we find Umb. *subator* = L. *subacti*, and *ā* is represented in Umb. by *aha*, or *ah*. In Latin *h* had a very weak sound between two vowels, for we find *veniens* = *vehemens*, *Ala* = *Ahala*, *prendo* = *prehendo*, &c. Initial *h* in early times seems scarcely to have been pronounced; for we find, in the *Senatus Consultum de Bacchanalibus* *abuisse* for *habuisse*, and *harenam* for *arenam*. It at last entirely disappeared about the end of the fourth Century A. D. Final *h* is found only in *ah!* and *vah!*

*J*, when initial in simple words, or in the second part of compounds, had the sound of the *E. y*. Hence we see that it is often lost in the latter case, as in *abicit*, *obicit*, *ecit*, *coicit*, &c. When it occurred between two vowels in simple words, *j* had a sound much nearer a vowel, and was frequently written *II*. This sound is also sometimes lost, as, in *plous* (Sc. de Eac.) for *plouis*. It finally became *z* (p. 13), as in

Fr. *jeune*, *juge*, *joint*, It. *giovane*, *giogo*, *giunto*, from L. *juvenem*, *jugum*, *junctum*. This change had already appeared in late Latin; for on a very late inscription *coniuncta* is found for *conjuncta*; *cujus* is also found written *κοζου*, and *Jesu Zesu*, where *z* is *z*<sup>3</sup>.

*S*, when initial, or when medial, before and after any consonant, except after *n*, was always sharp. Initial *s* only occurs before consonants in the groups *sp*, *sc*, *st*, and consequently must have been sharp. Initial *s* before a vowel was also sharp, for it has this sound in the Romance languages. When medial, it was also sharp before and after other consonants, as is proved by the forms *nupsi*, *lapsus*, &c. It generally vanishes before *m*, *n*, *l*, and *d*, as in *Camena* for *Casmena*, *cena* (Umb. *çesna*), *corpulentus*, *idem*, &c., while in a few cases it becomes *r*, as in *carmen*, &c. On account of its sharp sound, *s* was lost before *f*, as in *fallo* beside *σφάλλω*, &c. Between two vowels *s* was soft, as in the Romance languages; consequently in this position it generally became *r*, as in the termination of the gen. pl. *-arum* = Osc. *-azum* = Skr. *-ûsûm* (so Goth. *-izô* led to O. H. G. *-iro*, &c.), *generis* = I. E. *ganasas*, &c. *S* between two vowels was lost in *spei* for *spesi*, as we see from the old nom. pl. *speres* for *speses*. *S* had this soft sound after *n*, as in *consul*, *ensor*, &c., beside *cosol*, *cesor*, &c. So we find *μηζες* on an inscription for *menses*, and in Umb. *menzaru* = L. *mensarum*. Final *s* had in old Latin a very faint sound, as we see from its loss in such nominatives singular, as *vigil*, &c., in the nominatives plural of the *a*- and *o*-stems, in the verbal forms of 2 sing. *delectare*, *loquerere*, &c., beside *delectaris*, *loquereris*, &c., and in the adverbs *mage*, *pote*, for *magis*, *potis*. On inscriptions of the time of the Punic Wars, we find the *s* of the nom. sing. of the *o*-stems sometimes not written, and on inscriptions of the later Empire we find the same *s* also omitted. Cicero calls the omission of a final *s* before an initial consonant *subrusticum*, which is a proof that in his time this *s* had a very faint sound

in the language of the common people. *Z*, as we have already pointed out, was lost in early times, and *s* was employed to represent it, when initial, and *ss*, when medial, as in *sona*, *Saguntum*, *badisso*, *malacisso*, &c.; hence, to the old Romans, the Gr. *ζ* must have had a sound like a sharp sibilant. In the later Empire *z* must have had a sound between *d* and a sibilant; for we find such forms as *zabolus*, *zaconus*, &c., for *diabolus*, *diāconus*, &c. In old Umbrian *z* had perhaps, two sounds—a hard one, as in *pihaz* for *pihats* = L. *piatus*; and a soft one, as in *menzaru* = L. *mensarum*. In Oscan perhaps also, *z* had two sounds: it was soft in the gen. pl. term *-azum* = L. *-arum*, in *censazet* for *censasent* (censebunt), and it was hard in *hürz* for *hürts* = L. *hortus*, &c. In the pronunciation of *x* the sibilant predominated, for we also find it written *xs* from the time of the Gracchi; hence we find it represented by *s* in *sescenti*, *Sestius*, &c. This *s* has also disappeared before *d*, *n*, *m*, *v*, in *sedecim*, *seni*, *semestris*, *sevir*. In later Latin *x* and *s* were pronounced alike; for we find *visit*, *bisit*, and *bissit* for *visit*, *coius* for *conjux*, &c., and conversely *xancto* for *sancto*, *milex* for *miles*, &c. In Italian *x* has become *s* or *ss*, as in *straneo*, *esempio*, *vissi*, *sasso*, from L. *extraneum*, *exemplum*, *vixi*, *saxum*. Similarly in Greek we find *ξ* interchanged with *σ* or *σσ*, as in *δισσός* = *διξός*.

*F* is a peculiar Italian spirant, the symbol of which the Romans borrowed from the Æolic *F*, while the Etruscans, Umbrians, and Oscans used for it the symbol *g*. From its standing beside the digamma in such forms as *frango*, Gr. *Φρήγνυμι*, *frigus*, Gr. *Φρύγος*, &c., it is supposed *f* and *F* had the same sound, but this is absurd; for it might similarly be argued that *f* and *φ* had the same sound, from the parallel forms *fama* = *φήμη*, *fero* = *φέρω*, &c. Now, though the Greeks used *φ* for *f*, as in *Φάβιος* = *Fabius*, &c., we know that their sounds were perfectly distinct from the fact that Cicero ridiculed a Greek witness for his mispronunciation of *Funda-*

nus.\* Raumer accordingly considers  $\phi$  to have been equivalent at a certain period to  $bhv$ ; otherwise, he says, no one could say  $\phi$  in trying to say  $f$ . Priscian asserts that the only difference between  $\phi$  and  $f$  is, that the latter is pronounced *non fixis labris*; thus there would be produced a strong aspiration. This agrees with Quintilian's description of the sound, that it was formed *inter discrimina dentium*. The labial element in  $f$  was very weak; for we find *confero*, *infero*, Umb. *anferener*, and not *comfero*, &c.

$V$ , when initial, or when medial after a consonant, had the same sound as the E.  $v$ ; but when medial between two vowels, it had the sound of E.  $w$ ; and consequently in this latter position frequently vanished, as in *boun*, *petii*, *Gnæus* for *Gnævus*, &c. This loss of  $v$  became very common under the Empire, when we meet *Faonius* for *Favonius*, *Flaus* for *Flavus*, &c.  $V$  in the perfect of the  $a$ -conjugation was omitted by the common people, as *laborait* for *laboravit*, &c., which is identical with the Italian form of the perfect, as in It. *lavorai*, *amai*, &c. In Greek  $v$  was represented by  $ou$  or  $\beta$ , as in  $O\upsilon\acute{\alpha}\rho\rho\omega\nu$  beside  $B\acute{\alpha}\rho\rho\omega\nu$ , &c., and once on an inscription by  $ou\beta$  in  $M\eta\upsilon\upsilon\beta\iota\alpha\nu\omicron\varsigma$  for *Mevianus*. This shows that Latin  $v$  had a sound between  $ou$  and  $\beta$ .

Initial  $n$  had the strong sound of E.  $n$ , as is shown by the fact that it never in this position interchanges with any other sound within the limits of the Latin language. When medial, it was also strong between two vowels, as we see from its being frequently doubled, as in *Porsenna*, beside *Porsena*, &c. It was also strong before dental mutes.  $N$  (*adulterinum*) had a guttural sound before  $c$ ,  $q$ , and  $g$ . Final  $n$  had the sound of French nasal  $n$ , as we see from its vanish-

\* "Nam contra Græci aspirare solent, ut pro Fundanio Cicero testem Qui primam ejus literam dicere non posset, irridet." Quint. "Ins. Or.," I., 4, 14.

ing in nominatives singular in *-on*, as *ordo*, *homo*, &c.,\* and in *ceteroqui*, *alioqui*, and also from the fact that in the old dramatists it sometimes did not make position with a following consonant. Medial *n* was also weak† before *s*, *j*, *v*, *f*.

*M* had the sound of E. *m*. When final, it was very weak, and frequently disappeared. In compounds of *circum* and *com* it always was lost before a vowel, except in *comitium*. Final *m* was sometimes pronounced as *n* before *n*, *d*, *t*, as in *cun nobis* ("Cic. Orat.," 45, 145) for *cum nobis*, *an terminum* for *am* (= *ambi*) *terminum* (Orig. Macrob., Sat. I., 14), &c., and before an initial guttural sometimes as *n adulterinum*. On inscriptions of the times of the Punic Wars, final *m* of case term. *s* is sometimes written, and sometimes not; but after the time of the Sen. Cons. de Bac. it was nearly always written. In the first century A. D. final *m* was scarcely pronounced in vulgar Latin, and was at last entirely lost.

*L* had a strong sound when it ended a word or syllable, or when it had another consonant before it in the same syllable, as in *sol*, *silva*, *clarus*. It had a weaker sound when it began a word or syllable, as in *lectum*, *talis*; and it was weaker still when it succeeded another *l*, as in *ille*. *L* was probably strong in such words as *lac*, *latus* (for *tlatus*), *lis* (for *stlis*), &c., where a preceding consonant has been lost. On account of *l* having this strong sound when following a mute, it was frequently separated from this mute by a vowel, as in

\* I have here assumed that in the Græco-Italic period these nominatives ended in *-on*. This assumption is supported by the fact that we find corresponding nominatives in Greek ending in *-ων*; but, notwithstanding this, the existence of such nominatives is still very doubtful. As regards *ceteroqui* and *alioqui*, they may have originally ended in *i*, as other locatives, *domi*, &c. \*

† Priscian asserts that *n* was weak when it came after *m*, as in *damnum*, *columna*, *autumnus*, *scamnum*, *alumnus*, &c., but this is very unlikely; for the corresponding Italian words *danno*, *colonna*, *autunno*, *scanno*, *alunno*, &c., show that *n* here was at least a stronger sound than *m*, otherwise it could not have assimilated to itself the preceding *m*.

*dulcis* beside γλυκύς, *pulmo*\* beside πνεύμων, *scalpo* beside γλάφω, *sculpo* beside γλύφω. This *l* had a *u*-sound inherent in it, hence *periclum* became *periculum*, &c. In French this *u*-sound overpowered *l*, as in *chevaux* from *caballos*, *cheveux* from *capillas*, &c. *L*, beginning a syllable, was easily interchanged with *r*, as in *ruralis*, *floralis*, beside *solaris*, &c. *Ll* was pronounced nearly as *l*, as we see from the fact that *ll* and *l* are frequently interchanged on inscriptions and in manuscripts.

*R* was a dental sound, formed by the vibration of the tip of the tongue, as is shown by its being interchanged with *d* and *s*.

#### §. 67. PRONUNCIATION OF THE MUTES.

*C* was originally pronounced in all positions as E. *k*. That it was = *k* before *e* and *i*, is shown by inscriptions, where we find *Æcetiæ* for *Æquitæ*, *dekem* for *decem*, and by its being interchanged with *q*, *g*, and *ch*, in *querquetum* beside *Querquetulanus*, *vicies* beside *viginti*, *pulcer* beside *pulcher*. *C*, however, finally became a surd palatal spirant before *e* and *i*, as in Italian. Traces of this change are found in the interchange of *ci* and *ti*, in the suffix *-icius* or *-itius*, where the Skr. *-ika* shows that the former is original, as in *concio* beside *contio*, where the latter is original, as being contracted from *conventio*, &c.

It appears that *c* before *i* and *e* was still pronounced as *k* in the sixth and seventh centuries, A. D. ; for we then find δεκιμ for *decem*, φεκιτ for *fecit*, κρουκες for *cruces*, &c. Besides Gothic *k*, was used for L. *c* as in *aikeits*, *lukarn*, &c., beside L. *acetum*, *lucerna*, &c. Now, if *c* at this period had become the palatal spirant, neither Gr. κ nor Goth. *k* would have been used for it.†

\* *Pulmo* is not borrowed from the Gr. πνεύμων; for, if it were, its genitive sing. would be *pulminis* (= πνεύμονος), and not *pulmōnis*.

† Consult, however, "Gesammelte sprachwissenschaftliche Schriften," by Rudolph von Raumer, p. 93.

In Umbrian we find *c* weakened not only to the pal. spir. *ç*, for which\* the Umbrians employed the peculiar symbol **d**, but also to the dent. spir., as in Volscian: thus we have *çesna* = L. *cena*, *iseçetes* = L. *insectis*, *desenduf* = L. *duodecim*, *pase* = L. *pace*, *façia* = Volsc. *fasia* = L. *faciat*, &c.

*Qu* was perhaps nearly equivalent in sound to the E. *qu*, but the *u* assumed various shades of pronunciation according to the vowel† that followed: thus before *a* and *o* it was a pure *u*, before *æ*, *e*, and *i*, it was *u<sup>i</sup>*, and it finally coalesced with a following *u*, so that at last *cu* supplanted the older *quu*. In early times *quu* was frequently written *qu*, for on inscriptions we find such forms as *qum*, *peguniam*, &c. During the Empire *qu* was also written *q* before other vowels than *u*, as in *qintæ*, *qa*, *qe*, &c. The Umbrian and Oscan expressed *qu* in words borrowed from the Latin by *kv*, as Umb. *kvestur*, Osc. *kvaisstur* for L. *quæstor*. In later Umbrian *q* is used without *u*, as in New Umb. *dequrier* = Old Umb. *tekuries*\* = L. *decuriis*, New Umb. *peiqu* = L. *pico*. In Greek *qu* is expressed by *κου* and *κο*, and *qui* generally by *κυ*, as Gr. *υ* = *u<sup>i</sup>*: thus we have such forms as *Κούαδοι*, *Κουιρῖνος*, *Κόιντρος*, *Κόαδοι*, *Κυρῖνος*, &c.

*G* was pronounced as E. *g*. In Latin an older *k* was frequently replaced by *g*, while conversely in Old Umbrian *g* was hardened into *k*, at least in writing, if not in pronunciation, as in *antakres* beside L. *integris*, *vestikatu* beside L. *vestigium*, &c.

*T* was pronounced as E. *t*. When medial, it had a sharp sound, for it was frequently doubled on inscriptions, and in manuscripts, where we find such forms as *Attilia* beside *Attilius*, *quattuor* beside *quatuor*, &c. Final *t* was very weak; for we find it changed into *d* in *quid*, *quod*, *id*,\* &c., and in the old termination of abl. sing., as *pucnandod*, *altod*, *marid* (Col. Rostr.); and it was so weak, that it was sometimes entirely lost

\* In these cases *d* was perhaps the original sound; for final *t* in E. *what*, *it*, &c., points back to a Skr., Gr., and L. *d*.

in old Latin, as in *dede, dedro*, &c. In classical Latin *t* was restored, except in 3 pl. perf. as *censuere*, &c., but in later Latin it was again lost. In Umbrian, final *t* in the 3 sing. of the verb was lost, as in *habe* = L. *habet*, *portua* = L. *portet*, &c.; and also in the 3 pl., as in *benuso* = L. *venerunt*, &c. In Volscian *t* in 3 sing. was lost, as in *fasia* = L. *faciat*.

*D* was pronounced as E. *d*. Final *d* is sometimes interchanged with *t*, as in the forms *aput*, *at*, for *aput*, *ad*, found on inscriptions.

*P* was pronounced as E. *p*. Final *p* was weakened to *b*, after the falling away of a vowel, as in *ab* = Skr. *apa*, *sub* = Skr. *upa*, *ob* = Umb. *up*, but the original *p* was restored before *s* and *t*. Final *p* was also aspirated in old Latin, for we find *af* (Sen. Cons. de Tiburt.) for *ab*. Plautus, however, retains final *p* in *volup* for *volupe*.

*B* was pronounced as E. *b*. *B* could not have had the sound of *v* in early times; for we find *Burrus* for Πύρρος, *Boblicola* an old form of *Poplicola*, *hapeut* beside *abuisse*, &c. In the later Empire, however, *b* was sounded as *v*, as we find on inscriptions such forms as *deritum* for *debitum*, *verva* for *verba*, *acerva* for *acerba*, *bixit* for *vixit*, *laborabit* and *laborait* for *laboravit*, &c.

## §. 68. THE VOWELS.

An original *a* is lost in *sum* for *esum* = Skr. *asmi*, *gigno* for *gigeno* from I. E. *gan*, *patris* = I. E. *pataras*, &c.

*A* = I. E. *a*, especially before *c* and *g*; *acus*, Skr. *as'* (to be sharp); *ago* = Skr. *ag'ami*; *lacrima*, Skr. *as'ru* (a tear); *ab* = Skr. *apa* (from); *animus*, *anus*, Skr. *anila* (wind); &c. In Umbrian and Oscan an original *a* is retained more frequently than in Latin, as in O. U and O. *anter* = L. *inter*, *Anter-statai*\* (dat. sing.) = L. *Interstitæ* (the name of a goddess), N. O. *amprufid* = L. *improbe*.

\* The vowel *i* was perhaps equivalent to the Fr. *é fermé*. It is written *i* on the Bantine Table, but in the National Oscan Alphabet its sign is **ɪ**.

*E.* = I. *E.* *a* : *equus* = Skr. *as'vas* (a horse); *decem* = Skr. *das'an* (ten); *ferentem* = Skr. *bharantam* (acc. sing.), &c. This *e* has in some cases passed through *o* : *verto* = O. L. *vorto*, Skr. *vart* (to turn); *vester* = O. L. *voster*, Skr. *vas* (vos), &c. In Umbrian and Oscan *e* = I. *E.* *a* : N. U. *desen* = Skr. *das'an*; N. U. *petur* = L. *quatuor*; O. O. *set* (sunt) = Skr. *santi*; O. O. *mesiai* (dat. sing.) = L. *mediæ*, Skr. *madhya* (medius), &c. Short *e* was developed in some cases in Græco-Italic times, as we see from a comparison of *fero*, *decem*, *sex*, *ego*, &c., with *φέρω*, *δέκα*, *ἕξ*, *ἐγώ*, &c. In other cases, however, *a* existed then, from which in after times *e* was developed in one language, while *a* was kept in the other, as in *maneo* beside *μένω*, *egennis* beside *ἀχίν* (needy), *anguis* = *ἔχιδνα*, *centum* = *ἑκατόν*, &c. Long *e* was also developed in Græco-Italic times, as in *semi* = *ἡμι* -, *her* = *χίρ* (hedgehog), *siem* = *εἶην*, &c.

*I* = I. *E.* *a* : *ignis* = Skr. *agnis* (fire); *quinque* = Skr. *pañk'an* (five); *inter* = Skr. *antar* (within), &c. So also in Umbrian and Oscan, as in N. U. *dirsans* (3 pl. pres. conj.) from *dirs*, O. U. *ter*\*, for *did*, a reduplicated form of *da*; O. O. *ist* = Skr. *asti* (est), &c. *A*, in becoming *i*, passed through an *e*-stage, as we see from *assideo* beside *sedeo*, Skr. *sad* (to sit); *nominis*, gen. of *nomen* = I. *E.* *gnāman*; *artificis*, gen. of *artifex*, from *facio*, &c. *I* in some cases may represent an older *o*, as in *levis* = *λεῖος*, *-lis* (in *similis*, &c.) = *-λος* (in *ὁμαλός*, &c.) *-aris* (in *popularis*, &c.) = *-ηρος* (in *λυπηρός*, &c.), *imber* beside *ὄμβρος*, *ille* beside *ollus*, *illico* beside *locus*, *inquilinus* beside *incolo*, &c.

\*

*O* = I. *E.* *a* : *vomo*, Skr. *vam* (to vomit); *vōs* = Skr. *vas* (ye); *ovis* = Skr. *avis* (a sheep); *pmorior*, Skr. *mar* (to die), &c. *So* represents *sva* in *somnus* = Skr. *svapnas* (sleep); *soror*, Skr. *svasār* (sister); *sonus* = Skr. *svanas* (sound); *socer* = Skr.

\* *R*, represented in the Old Umbrian Alphabet by *q*, and in the New Umbrian by *rs*, marks a peculiar change of *d*, and was probably a strong hissing *r*.

*svas'uras* (father in-law); *socrus* = Skr. *s'vas'rūs* (mother-in-law). In Old Latin *o* is kept, where in later Latin *u* is found. before *s* and *m*, in the terminations *-tos* (nom. sing. masc.) and *-tom* (acc. sing. masc. and neut.), in neuters in *-os*, as *genos* = Skr. *g'anas*, and *Venos* (fem.), in dat. pl. term. — *los* = Skr. *bhyas*. In New Umbrian,  $\ddot{o}$  = I. E.  $\ddot{a}$ . This N. U.  $\ddot{o}$  is represented in Old Umbrian by  $\ddot{n}$ , and is consequently a return to that older stage through which the Old Umbrian  $\ddot{n}$  must have passed, just as the old *o* has been restored in Italian. Thus we have O. U. *puplum*, N. U. *poplom* = L. *populum*, from I. E. and Skr. *par* (to fill); N. U. *ortom* = L. *ortum*; O. U. *nūmen*, N. U. *nōmen* = L. *nōmen*; N. U. *erom* (infinitive of verb *es*, to be), an accusative of an *o*-stem; N. U. *aferom* (ambiferre), &c. In Oscan,  $\ddot{o}$  = I. E.  $\ddot{a}$ : O. O. *putiurūs\** (nom. pl.) = I. E. *kva-turās* = Gr. *πύτεροι*, L. *utri*; O. O. *puīd*, N. O. *pot* = L. *quod* = I. E. *kvad*; O. O. *vīū* = L. *via* (but *a* is kept in acc. *vīam*, *vīa*, = L. *viām*, *pam* = L. *quam*, &c.); in O. O. abl. sing. *sakaraklūd* (sacello), although the usual term is *-ūd*. This  $\ddot{o}$  = I. E.  $\ddot{a}$  was developed in some cases in Græco-Italic times, as in *sol-lus* = *ἔλος*; *pro-* = *προ-*; *odor* beside *ὄζειν*; *ferō* = *φέρω*; *duō* (*duō*, however, is more usual) = *δύω*; *ambō* = *ἄμφω*. In many other cases, however, *a* existed then, as we see from the fact that the original *a* is kept in one of these languages, and *o* in the other, or it becomes *e* in one language, and *o* in the other: thus we have *o* beside *a* in *domare*, beside *δαμᾶν*, *arduus* beside *ὀρθός*, *dure* beside *διδόναι*, *cornus* beside *κράνον*, *lancea* beside *λόγχη*, &c., and *e* beside *o* in *novus* = *νέφος* = Skr. *navas* (new), *vomo* beside *ἐμέω*, Skr. *vam* (to vomit), *vox* beside *ἔπος*, Skr. *vak'* (voice), &c. •

*U* = I. E. *a*, which had previously passed through *o*: *genus* = O. L. *genos* = Skr. *g'anas*, Gr. *γένος*; *opus* = Skr. *apas* (work); *ferunt* = O. L. *feront* = Gr. *φέρουντι* = Skr. *bharanti* (they bear); *navibus* from *navibos* = Skr. *nāubhyas*; *datus* = Gr. *δοτός*;

\*  $\ddot{U}$ , in the Oscan Alphabet represented by  $\ddot{V}$ , was pronounced as Latin *o*.

*quum* = O. I. *quom* = I. E. *kvam*, &c. In Umbrian *ũ* = I. E. *ā*; O. U. *puplum* = *populum* ; N. U. *dupursus* (δίποσι) = Skr. *dvipadbhyas* (bipedibus); O. U. and N. U. *vinū* = *vino* = O. L. *veinōd* = I. E. *vaināt*; N. U. *kvēstūr* = O. L. *quaistōr*. In Oscan *ũ* = I. E. *ā*: *-ūd* (term. of abl. sing.) = I. E. *-āt*, as in O. O. *aragetud* = L. *argento*; N. O. *kenstūr* = L. *censōr*; *-um*, the termination of the infinitive, which was an old acc. of an *o*-stem, and therefore was = I. E. *-am*, as in *deicum* (dicere), *ezum* [esse, U. *erom*], *moltaum* (moltare), &c. Traces of this infinitive are found in Latin, in *venum-ire* and *venum-dare*. It is possible that this *u* may have been developed in Græco-Italic times, but such Græco-Italic examples are rare; perhaps *λύκος* = *lupus*, from I. E. *varkas*, is one. *U* = I. E. *a* in some cases passed through the *u*-stage, and became *i*; this *u*<sup>i</sup>-sound was represented by *ı* by Claudius. Thus we have *optimus* = O. L. *optunius*; *mancupium* (in Plautus) = *mancipium*; *occupare* beside *incipere* from *capiō*, &c.

*I* = I. E. *i*: *imus* = *ἰμεν* = Skr. *imas* (we go); *scindo*, *σχίζω*, Skr. *khinadmi* (I split); *linguo*, *λείπω*, Skr. *rik'* (to leave); *quid* = *τί*, Skr. *kim* (what); *ovis* = *ὄις* = Skr. *avis* (a sheep), &c.

*E* = I. E. *i*: *index*, *indicis*, from R. *dic* = Skr. *dis'* (to point out); *ignem* = Skr. *agnim* (fire); *navem* beside *navim*; *mare* for *mari*, as is shown by *maria*; *navebos* (Col. Rostr.) *tempestatebus* (t. Scipion, B. f.) from the stems *navi-* *tempestati-*. In these cases *e* is younger than *i*, whereas in the cases where *i* = I. E. *a*, *i* must have passed through an older *e*-stage.

*U* = I. E. *u*: *cluo* = *κλύω*, Skr. *s'ru* (to hear); *jugum* = *ζυγόν* = Skr. *yugam* (par); *rumpo* = Skr. *lumpāmi* (I break); *uro* for *uso*, Skr. *ush* (to burn); *tundo*, *tutudi*, Skr. *tudāmi* (I strike); *super* = *ὑπέρ*, Skr. *upari* (over), &c. Long *u* sometimes appears to arise from a non-original lengthening of an older *ũ*, as in *tū*, Skr. *tvam* (thou), Gr. *τύ*, Goth. *thu*, and perhaps in *sūs* = *ῥς*, *mūs* = *μῦς*, &c. *U* = I. E. *u* also in Umbrian and

Oscan ; O. U. *fuia* (sit) = Skr. *bhûyât*, and *futu* (esto) from R. *fu* = Skr. *bhu* (to be) ; N. U. *rufrēr* (nom. pl.) = L. *rubri*, Skr. *rudhira* (blood), N. O. *fuid* (opt. perf.) and *fust* (3 sing. fut.) from R. *fy*.

*O* = I. E. *u*, only in *fore* from R. *fu*.

*I* = I. E. *u* : *libet* beside *tubet*, Skr. *lubh* (to desire) ; *cliens* from *cluo* ; *lacrima* = *lacruma*, Skr. *as'ru* (a tear) ; *tibi*, Skr. *tubhyam* (to thee) ; *manibus* for *manubus* ; *fructifer*, *arcitenens*, *corniger*, &c., for *fructufer*, *arcutenens*, *cornuger*, &c. So also in Umbrian we find O. U. *sin* (acc. sing.), *sif* (acc. pl.) from a stem *si* (a pig), L. *sus* ; O. U. and N. U. *mani* (abl. sing.) = L. *manu* ; O. U. *tiu*, N. U. *tiom*, *tio* (acc. sing) = Skr. *tram*.

## §. 69. GUNA AND VRDDHI.

The I. E. *a* is represented in Latin by *e*, *o*, *a* ; its *guna* is *o*, *ē*, *ā*, as in Greek ; its *vrddhi* is perhaps *ō* and *ū*. The *guna* of *i* was in O. L. *ei*, later *ī* and *ē*, and *ai*, later *ae* ; its *vrddhi* was in O. L. *oi*, later *oe*, *ū*, *ī*. The *guna* of *u* was in O. L. *eu*, and later *au*, *ō* ; its *vrddhi* was in O. L. *ou*, later *ū*. In Latin *eu*, the old *guna* of *u*, was supplanted by the *vrddhi* *ou*, while conversely in Greek the *vrddhi* *ou* was supplanted by the *guna* *ev*. In the following table\* the O. L. diphthongs are placed in brackets.

|                  |                                  |   |                                   |
|------------------|----------------------------------|---|-----------------------------------|
| Primitive Vowels | <i>e</i> , <i>o</i> , <i>a</i> , | <i>i</i>  | <i>u</i>                          |
| Guna             | <i>o</i> , <i>ē</i> , <i>ā</i> , | ( <i>ei</i> ) <i>ī</i> <i>ē</i> , ( <i>ai</i> ) <i>ae</i> | ( <i>eu</i> ), <i>au</i> <i>ō</i> |
| Vrddhi           | <i>ō</i> <i>ū</i>                | ( <i>oi</i> ) <i>œ</i> <i>ū</i> , <i>ī</i>                | ( <i>ou</i> ) <i>ū</i>            |

\* In this table I have followed Schleicher, except that in some cases I consider *ī* to be a *vrddhi* of *i*. Many of the examples given by him to illustrate this table are very doubtful. Indeed, it is almost impossible to separate from each other the spheres of *guna* and *vrddhi* in Latin, on account of the almost universal reduction of the old diphthongs to monophthongs. This is also the case with Umbrian. In Old Latin and Oscan these diphthongs have been kept, but then here we labour under a want of materials.

**Ā** is the guna of *a* in the following examples : *pāx*, *pācis* beside *pācisci* ; *lāterna* beside *lāteo* ; *vāgina* beside *vāco* ; *suf-frāgium* beside *frāgor*, from R. *frag* (to break) ; *sāgire*, *sāgus* beside *sāgax* ; *lābi* beside *lābare* ; *amb-āges* beside *āgo*, *amb-igere* ; *frāter*, Skr. *bhrātā*, from R. *bhār*, &c. The feminine of the *a*-stems also ended in *ā* originally ; *novā* = Gr. *νέφα* = Skr. *navā* (new) ; *coctā* = Gr. *πεπτή* = I. E. *kvaktā*, &c. So in Umbrian *ā* (written *aha*, *ah*) is guna of *ā*, as in O. U. *frā-trum*, N. U. *frātrōm* (fratrum), &c. So also in Oscan, as in *Staatīs* = L. *Stātius*, beside *stātus*, from R. *stā*.

**Ē** is guna of *ē* : *tēgula* beside *tēgo* ; *lēx*, *lēgis*, *collēga* beside *lēgo* ; *rēx*, *rēgis* beside *rēgo* ; *sēdes* beside *sēdeo* ; *sēmen* beside *sātus* from R. *sā* ; and perhaps a few other cases. *I* may be guna of *ī* in *sīca* beside *sēco*.

**O** is guna of *ō* : *procus* beside *precor* ; *fors*, *fordus* (pregnant) beside *fero* ; *toga* beside *tēgo*, Skr. *sthaḡāmi* (I cover) ; *moneo* beside *mens*, *memini*, Skr. *man* (to think) ; *noceo* beside *nēco*, Gr. *νέκυς*, Skr. *nas'* (to kill) ; *modus* beside *mederi* ; also before two consonants in *pondus* beside *pendere*, *extorris* beside *terra*, &c. *O* is guna of *a* in *portio* beside *pars*, *scobina* beside *scābo*, &c.

**Ō** is considered by Schleicher to be the vr̥ddhi of *a*, especially when an original *a* in a root is represented by *o* : *persōna* beside *sōnus*, Skr. *svan* (to sound) ; *vōmer* beside *vōmo*, Skr. *vam* (to vomit) ; *sōpio* beside *sōpor*, Skr. *svap* (to sleep) ; *sōdes* beside *sōdalis* ; *vōx*, *vōcis* beside *vōco* ; *ōcior* beside Gr. *ὠκύς* = Skr. *ās'us* (quick), from R. *as'* (to be sharp) ; *dōnum*, *dōs*, *dōtis* beside *dātus* from R. *dā* ; *gnōtus* = Gr. *γνωτός*, *gnōmen* beside *nōta*, *cognitus* ; *datōrem* = Gr. *δοτήρα* = Skr. *dātāram*, &c. **Ū** is found beside *ō* in *-tūrus* beside *-tōr* (*datūrus* beside *dator*, &c.) ; term. of gen. pl. *-um*, *-rum*, for *-ām*, *-rām* = Skr. *-ām*, *sām*. In Umbrian we find O. U. *ū*, N. U. *ō*, as vr̥ddhi of *a* : O. U. *nūmen*, N. U. *nōmen* = L. *nōmen* ; term. of gen. pl. O. U. *-ūm*, N. U. *-ōm*, as in O. U. *frātrūm*, N. U. *frātrōm* ; N. U. *kvēstūr* = O. L. *quaistor*, &c. In Oscan *ī* is

vr̥ddhi of *a* in N. O. *kenstūr* = L. *censor*; O. O. *Flunsai* = L. *Flōræ* from R. *fla*.

(*Ei*), *i*, *ē* is the guṇa of *i* in the following examples: *divus* (*deivæ*, *deivinam*, &c., are found on inscriptions) from R. *div* (to shine); *dico*, O. L. *deico*, beside *causidicus* from R. *dic* = Skr. *dis'* (to point out); *idus*, O. L. *eidus* (the days of full moon, and therefore the brightest days), beside Skr. *idh* (to burn); *is*, *it*, *itur* (from *eo*, I go), beside *eis*, *eit*, *eitur*; *difeidens*, *confido* beside *perfidus*; *leibertinus* beside *libido*, &c. In Oscan we find O. O. *ei*, N. O. *ei* as guṇa of *i* in N. O. *d-icum* (infin.) from R. *dic*; N. O. *deivaum*\* (infin. to swear), O. O. *dēvai* (dat. sing.) beside L. *divus* from R. *div*.

(*ai*), *ae* is the guṇa of *i* in *aidilis*, *aedes*, *aestas* (for *ædtas*) beside Skr. *idh* (to burn), Gr. *αἶθω*, *αἶθρο*; *aivom*, O. L. *aivom*, from R. *i* (to go); *aemulus* beside *imitari*; *mæstus* beside *miser*; and perhaps a few other cases. In Oscan we find *ai* as guṇa of *i* in O. O. *aidilis* = L. *ædiles*, and in Umbrian *ē*, as in O. U. *kvēstur* = O. O. *kvāstur* = O. L. *quaistor*.

(*Oi*), *œ*, *ū* is the vr̥ddhi of *i*, as in *fœdus* beside *fides*; O. L. *læbesum* (= *liberum*) beside *libet*;† *oitile*, *oetier*, *utier*; *loidos*, *loedos*, *lūdus*; *moiros*, *moeros*, *mūrus*; *ploirume*, *ploera*, *plures*; *coiravit*, *coeravit*, *cūravit*; *moinicipium*, *comoinem* (Sc. de Bacc.), *inmœnis*, *comānis*; *oinvorsei* (Sc. de Bacc.), *œnus*, *ūnus*, &c. In Oscan we find O. O. *ui*, N. O. *oi*, as vr̥ddhi of *i*, as in O. O. *mūiniks* (nom. sing. masc.) beside O. L. *comoinem*; *ūttiuf* beside *oitile*, *utier*.

*I* appears to be the vr̥ddhi of *i* in a few cases: *mītis* for

\* As *deivaum* in Oscan means 'to swear,' from St. *deiva* (a god), so in Lettic we find the infin. *devatees*, also meaning 'to swear,' from St. *deeva* (a god), *devs* (nom. sing.) = L. *divus*.

† The roots *lib* and *fid* are the only two roots in Latin that appear as well in their simple as in their guṇa- and vr̥ddhi-forms: thus we have R. *lib*, *libet*, *leibertinus*, *loebesum*; R. *fid*, *fides*, *difeidens*, *foidus*.

*moitis*, O. Ir. *moith* and *moeth* (tender); *vīnum*\* for *voinum*, beside Gr. *οἶνος*; *vīcus* for *voicus*, beside Gr. *οἶκος*. Schleicher considers *vinum* and *vīcus* to be examples of *guṇa* and not *vr̥ddhi*; but it is better to suppose that the *vr̥ddhi*-forms existed in Græco-Italic times. In Sanskrit the *guṇa*-forms occur, *vēs'as* = *οἶκος* and *vēna* (pleasant).

*Eu*, the old *guṇa* of *u*, is found only in the proper name *Leucesius* (Carm. Saliar.), beside *lūcerna* from R. *luc*. In some other words *eu* is found, where it is not a *guṇa*; thus we have *neuter* for *ne-uter*, *neutiquam* for *ne-utiquam*, *neu* for *neve*, *seu* for *seve*, *ceu*, *heu*, *eheu*, in which cases *eu* is not the *guṇa* of *u*. The *vr̥ddhi* *ou* has in other cases been substituted for *eu*, as in *dūco*, O. L. *douco*; *ūro* for *ouso*, and this again for *euso* = Gr. *εὔω* = Skr. *ôshāmi* (I burn), from R. *ush* = I. E. *us*; *jūs*, O. L. *jous*, is for *jovos*, and this again is for *jēvos*, which is formed by *guṇa* from R. *ju* (to join), as *κλέφορ* is formed from R. *κλυ* and Skr. *s'ravas* (nom. sing. neut.) from R. *s'ru*; *jūs* (sauce) is also formed in the same way from R. *ju*, which is found in Gr. *ζύμη* (leaven), and Sl. *jucha* (sauce); *pūs* = *povos* = *pevos* beside Skr. *pūy* (to be foul), Z. *pû* (to stink); *pluont* = *plovont* = *plevont* = Gr. *πλέθοντι*, whence *πλέουσι*, from R. *plu*; *fluont* = *flovont* = *flevont*, from R. *flu*, and similar present forms; *trūdo* = *troudo* = *treudo*, beside *trūdis*, &c. In Oscan also the *vr̥ddhi* of *u* appears to have taken the place of the *guṇa*, as in O. O. *tivtiks* (urbanus), N. O. *touto* (a city) from R. *tu* = Skr. *tu* (valere).

*Au* may be the *guṇa* of *u* in *raudus* (unpolished brass), from R. *rud* (to be red) = Gr. *ρῦθ*.

Curtius and Schleicher consider also that *aurora* and *augeo* are cases of *au* as *guṇa* of *u*: *aurora* and Gr. *αὔρω* pointing

\* The connexion of *vēna* (pleasant), an adjective applied in Sanskrit to the drink *Soma*, with *οἶνος* is very doubtful. I have already connected the latter with the root *vi* (to bind), whence came *vīh* (the vine), and L. *vīeo*, *vitis*. Others treat *οἶνος* as a borrowed word, and connect it with Heb. *yain*, Æthiop. *wain*, (wine).

back to a Græco-It. *ausōs*, from R. *us* = Skr. *ush* (to burn), this root appearing in its guna-form in the European languages as O. N. *austur* (oriens), Lith. *auszrà* (morning), while it appears in its simple form in Sanskrit and Zend as Skr. *ushâsâ* (morning), *ushâ* (early), Z. *usha* (morning); *augeo* beside Gr. *αὔξω*, Lith. *áugu* (I grow), from R. *ug*. I have already (p. 65) pointed out that these words are susceptible of a different explanation. *Au* frequently becomes *o*, by passing through the step *ao*, which is found in *Aorelius*, which occurs on an old inscription. Thus we have *rōdus* for *raudus*, *cōda* for *cauda*, &c. *Au* frequently arises from *av*, as in *cautus* from *caveo*, *fautor* from *faveo*, &c.

(*Ou*), *ū* is the *vr̥ddhi* of *u*, as in O. L. *Loucina*, *loumen*, *Loucetios* from R. *luc*; *rūfus* from R. *rudh*, &c. In *pouublicos*, *ou* appears to be the *vr̥ddhi* of an *u* that represents an original *a*. In Umbrian, O. U. *ū*, N. U. *ō* is also the *vr̥ddhi* of *u*, as in N. U. *rōfu* = L. *rūfos*, &c. (*Ou*) *ū* in Latin arises also from the rejection of the spirant *j*, and from the vocalization of *v*, as in *cuncti* = *cojuncti*, *plous* for *plojus*, *noundinum* (Sc. de Bacc.) for *noveudinum*, *nountios* for *noviventios*, &c.

## §. 70. ASSIMILATION OF THE VOWELS.

One vowel is often assimilated to a preceding one, as in *luteolus* from St. *luteu-*, *vinolentus* from St. *vinu-*, beside *hortulus*, *truculentus*; *tristitiēs* beside *tristitia*; *siem* = Skr. *syām*; *-iens* (in *totiens*, &c.) beside Skr. *-iyāns*; *o* being nearer than *u* to *i* and *e*, and *e* being nearer than *a* to *i*.

One vowel is assimilated to a following one, as in *exilium* beside *exul*; *nihil*, *nisi*, *nimis*, *nimirum* beside *ne*, *nefas*; *familia* beside *famulus*; *bene* beside *bonus*; *illecebræ* beside *illicio*; *soboles* for *suboles*; *socors* for *secors*; *queam* beside *quire*; O. L. *filea* = *filia*; *mihi*, *tibi* beside *me*, *te*, U. *mehe*, *tefe*; *nausea* = Gr. *ναυσία*, &c.

Vowels are frequently influenced by neighbouring conso-

nants. Thus the labials and *l* prefer *u*, as in *Hecuba* = Ἑκάβη; *occupo*, *aucupium*, beside *capio*; *contubernium* beside *taberna*; O. L. *pocolom* becomes *poculum*; *epistula* = ἐπιστολή; *monumentum* beside *monimentum*; *puls* beside πόλος; *sepultus* from *sepelio*; *insulsus* from *salsus*, &c. *R* frequently prefers *e* before it, as in *operis*, *cineris*, beside *nominis*; *camera* from καμάρα, &c. In some cases *r* takes before it *o*, where otherwise we should have expected *u*, as in *ancora* = ἄγκυρα; *foris* beside θύρα; *fore* from R. *fu*; *corporis*, gen. sing. of *corpus*; *por* (in *Marcipor*) = *puer*. The dental *n* prefers *i* in *cecini* from R. *can*; *machina* from μηχανή; *nominis*, *hominis*, &c. Final *n*, however, changed this *i* into *e*, as in *cornicen*, *nomen*, &c.

#### §. 71. DISSIMILATION OF THE VOWELS.

The Latin language does not allow one vowel to be followed by the same without the intervention of a consonant, but always changes the first or second of these vowels into another, as *i* into *e*, and *u* into *o*. Thus we have *pietas*, *ebrietas*, *societas*, for *piitas*, &c., beside *levitas*, *caritas*; *arietis*, *parietis*, for *ariitis*, &c., beside *militis*; *alienus*, *Avienus*, &c., beside *peregrinus*, &c.; *hietare* beside *clamitare*; *variegare* beside *levigare*; *laniena* beside *carnificina*; *meio* for *miio*, and this for *māgjo*, beside *mingo*, Gr. ομίχω; *peior* for *piior*; *ei*, *eis*, *dei*, &c., are older and more classical forms than *ii*, *iis*, *dii*, &c., which were also sometimes written *ī*, *īs*, *dī*, &c.; *petiei*, *ostiei*, *Juliei*, *vieis*, &c., beside the later forms, *petii*, *ostii*, *Julii*, *viis*, &c. Up to the period of Augustus we never find *uu* or *vu*, but always *uo* and *vo*, as in *equos*, *servos*, *novom*, *æquom*, *vulpes*, *volt*, &c.

#### §. 72. VOWELS LENGTHENED IN COMPENSATION.

When a consonant is lost, the preceding vowel is frequently lengthened in compensation; or, if two vowels are thus brought together, they are contracted into one. Thus

we have in the first case *pēs* for *pedes* ; *aries* for *ariets* ; *pōno* for *posno*, R. *pos*, found in *pos-ui* ; comp. term. *-iōr*, *-ioris* = I. E. *-yans*, *-yansas* ; acc. pl. term. *-ōs* = I. E. *-ans*, &c. In many cases, however, this vowel is again shortened, as in *pedēs* for *pedēs* = *pedēts*, *patēr* = Gr. *πατήρ*, for *patērs*, &c. Again, we find contraction in *fēci* for *fēsīci*, R. *fac* ; *frēgi* = *frēfrēgi*, R. *frag* ; *fōdi* for *fōfōdi*, R. *fod* ; *mōvi* for *mōmōvi*, R. *mov* ; *fāvi* for *fājāvi*, R. *fav*, &c. Similarly we have *nēmo* for *neemo* = *ne-homo* ; *vemens* = *vehemens* ; *amō* = *amao*, and other verbs of the first conjugation, &c.

### §. 73. WEAKENING OF THE VOWELS.

Vowels are generally weakened in words whose weight is increased either by *reduplication*, or by *composition*, or by being formed from other stems by means of *suffixes*. Thus *a* becomes *e*, as in *fallo*, *fefelli* ; *parco*, *peperci* ; *barba*, *imberbis* ; *farcio*, *refercio* ; *factus*, *perfectus*, &c.

*A* becomes *i*, as in *tango*, *contingo* ; *capio*, *accipio* ; *fateor*, *confiteor* ; *manus*, *eminus* ; *nam*, *enim* ; *pater*, *Jupiter* ; *cano*, *cecini*, &c. This *i* of course passed through the stage *e*, and *e* is still kept in cases where *i* might have been expected, as in *peperi* (*pario*), *tubicen* (*cano*), where the retention of *e* is due to *r* and final *n*.

*A* becomes *u*, as in *capio*, *occupo* ; *datus* = I. E. *datas*, Gr. *δοτός* ; *taberna*, *contubernium*, &c. This *u* passed through the stage *o* ; thus L. *datus*, and Gr. *δοτός*, point back to a Græco-Italic *datos*.

*Ā* becomes *ē*, as in *hālo*, *anhēlo*.

*E* becomes *i*, as in *lego*, *colligo* ; *emo*, *redimo* ; *teneo*, *retineo*, &c. In reduplicated syllables *e* is unchanged, as in *tetendi*, *pependi*. *Ē* becomes *ī*, as in *lēnis*, *delīnīre* ; *tēla*, *subtilis* ; it becomes *ē* in the reduplicated perfect *pēpēdi*.

*Æ* becomes *ī*, as in *aequus*, *iniquus* ; *cædo*, *cecīdi*, &c.

*Au* becomes *ō* and *ū*, as in *fauces*, *suffōco* ; *plaudo*, *explōdo* ; *causa*, *accūso* ; *claudo*, *inclūdo*, &c.

Long vowels and diphthongs are even weakened to short vowels, as in *agnītus*, *cognītus*, beside *nōtus* ; *dejēro*, *pejēro*, beside *jūro*, O. L. *jouro*.

O and u are also weakened to i, as in *duritas* from St. *duro*— ; *corni-ger* from St. *cornu*,\* &c. In reduplicated syllables, however, o and u remain generally unchanged, as in *poposci*, *spopondi*, *totoñdi*, *momordi*, *pupugi*, *tutudi*, *cucurri*. In Old Latin these forms were sometimes lightened, as we find O. L. *spespondi*, *peposci*, *memordi*, *tetuli*, *pepugi*, *cecurri*.

In Umbrian and Oscan the original vowel is not weakened, as in Latin, in compounds, &c. Thus we have O. U. *arkani* from R. *kan* (canere); and *ar* (ad) ; N. U. *procanurent* from same root as last ; O. U. *arhabas* = L. *adhibeas* ; N. U. *Jupater* = L. *Jupiter* ; O. O. *Anterstatu* = L. *Interstita* ; O. O. *anter* = L. *inter* ; N. O. *amprufid* = L. *improbe* ; N. O. *fefacid* (3 sing. opt. perf.), *fefacust* (3 sing. fut. exacti) from *fefac*, a reduplicated form of R. *fac*. If *hipid* (3 sing. opt. perf.), *pruhipust* (3 sing. fut. ex.) be from the same root as L. *habeo*, we have here a case of *a* being weakened to *i*, in Oscan ; *hip* being for *hihip*, and this for *hihap*, and therefore having been *hīp* originally.

#### §. 74. SHORTENING OF THE VOWELS.

Vowels in unaccented final syllables are very generally shortened in Latin, and hence a few examples will suffice. The final *a* of the feminine *a*-stems was long in Indo-European, and is still long in Sanskrit. In Old Latin it was also long, but in classical Latin it has been shortened. Final *a* in *triginta*, &c., was once long, but in the later poets it is short. Final *e* of the ablative of the *i*-stems was also long, as representing an I. E. *ait* or *aīd* ; *patrē* is still found in *Gnaivōd patrē prognātus, fōrtis vīr sapiēnsque* (tit. Scip. Barb.). We find *cavē*, *jubē* beside *cavē*, *jubē* ; *mīhī*, *tībī* for *mihei*, *tibei* ; *duō*, *ambō*, *octō*, *egō*, beside Gr. *δύω*, *ἄμφω*, *ὀκτώ*, *ἐγώ* ; *homō*, &c., for *homō* ; final *o* of the first pers. sing. pres. and fut. active

is either long or short, representing an I. E. *ā*, as *-ō* (in *ago*, Gr. *ἄγω*) = *-ā* = *-āmi*, &c.

Vowels are shortened always before final *t*, as in *amāt* for *amāt*, &c. : traces of the original *ā* are still found in the Poets, as in Plautus, Terence, &c. The same is the case with the verbal terminations *-et*, *it*, and *is*. We find also *matēr* for *matēr*, Gr. *ματήρ*; *prætōr* for *prætōr*, &c.

Medial vowels are also frequently shortened, as in *docēo* for *docēo*; *audīo* for *audīo*; *rēi* for *rēi*; *spēi* for *spēi*; *dēus* for *dēus*, and this for *deivos*; *Diana* for *Dīana*; *unūs* beside *uniūs*; &c.

### §. 75. TOTAL LOSS OF THE VOWELS.

Final *e* is lost in the imperatives *dic*, *duc*, *fuc*, *fer*, *inger* (Catull. 27, 2); in *hic*, *hæc*, *hoc* for *hice*, &c.; in voc. *fili* for *filie*, &c.; in imper. *audi* for *audie*, &c.; in *amor* (1 sing. pres. pass.) for *amose*; &c.

Final *i* is lost in *est* = Gr. *ἐστί*; *ferit* = Skr. *bharati*; *ferunt* = Skr. *bharanti* (*tremonti* is still found in Carm. Saliar.); *feris* = Skr. *bharasi*, &c. *I* is lost in *pulvinar* beside *pulvinare* for *pulvinari*, and similar nouns in *-ar* = *-ari*; *piper* = Gr. *πέπερι*; *facul*, *difficul*, *simul* = *facile*, &c., for *facili*, &c.; *tot* = Skr. *tati*; *quot* = Skr. *kati*; *ut* beside *uti*, U. *ote*, O. *auti*; *ob* = Gr. *ἐπί* = Skr. *abhi* (ad); *ad* = Skr. *adhi* (super, ad), &c.

Final *o* is lost in *ab* = Gr. *ἀπό* = Skr. *apa* (ab); *sub* = Gr. *ὑπό* = Skr. *upa* (ad); for, as the *o*-stems in Greek and Latin correspond to the *a*-stems in Sanskrit, the Græco-Italic forms of *ab* and *sub* must have ended in *o*.

Medial vowels are lost before either vowels or consonants: thus before a vowel *i* is lost in *minus* for *minius*, *semānimus* for *semi-animus*; *e* is lost in *nullus* for *ne-ullus*, *nusquam* for *ne-usquam*; *o* is lost in *undeculos* for *uno - oculus*.

Medial *a* is lost before a consonant in *palma* = Gr. *παλάμη* through *paluma*; *cypressus* = Gr. *κυπάρισσος* through *cuperes-*

*sus*; *cervos* = Gr. κεραφόος (horned); *domui*\* for *domāvi*, and similar perfects, *a* being first weakened to *i*, and then this *i* falling out, &c.

Medial *e* is lost between *b* and *r* in the suffixes *-bra*, *-bris*, *-brum*, from R. *fer* = Skr. *bhar*\*; between *p* and *r* in *capri*, *supra* beside *supera* (in Lucr.), *infra* beside *infera*, &c.; between *t* and *r* in *intra*, *contra*, *dextra* beside *dextera* (*-tra* being the comparative suffix, Skr. *-tara*, Gr. *-τερο*, Osc. *-toro*, U. *-tro*); *patris* for *pateris*; *habui* for *habēvi*, and similar perfects, *ē* having first passed through *i*, as in *habitum*; *repperi* for *repeperi*; *rettuli* for *retetuli*, &c.

Medial *i* is lost in *caldus* = *calidus* (warm); *soldus* = *solidus*; *valde* = *valide*; *cante* (Carm. Saliar.) = *canite*; *nauta* = *navita*; *calx* = Gr. χαλίξ; term. *-mnus* (in *alumnus*, *vertumnus*) = *-minus* (in *terminus*, *amanini*) = Gr. *-μενος* = Skr. *-mānas*; *fertis* = *feritis*, *fert†* = *ferit*, *volt* = *volit*, and similar verbal forms; *dixti* for *dixisti*, &c. Under the later Empire we find such forms as *fect*, *viat*, *expensavt*, &c. *I* is often lost in the *i*-stems: thus we have *primas* for O. L. *primatis*; *sors* beside *sortis*; *plebs* for *plebis*, whence *plebes*; *scobs* beside *scobis*, &c. In consequence of this loss of *i*, the consonantal and the *i*-stems coincide in the form of nom. sing. Medial *i*, is lost before a consonant sometimes in Umbrian and Oscan, as in U. *nōmnē* = L. *nomini*, &c.; O. *cevs* = *civis*; U. *fus* = O. *fust* = L. *fuerit*; U. *habus* = O. *hipust* = L. *habuerit*; U. *convortust* = L. *converterit*, &c. Comparing U. *habus*, O. *hipust* with L. *habessit*, we see that the Umbrian and Oscan forms have lost two *i*s, the *i* of the perfect, and the conjunctive mark *i*. The perfect *-vi* has completely disappeared in L. *habessit*; and the only trace of it is found in the sharp *s*, written *ss*, while *habuerint* stands nearest to the original form *habe-vi-sint*.

\* In Latin the accent was originally placed as far back as possible. Consult Appendix B.

† *Fert* may be the older form, as we find Ved. *bharti* (*fert*).

In nouns of the *o*-stem, *o* or *u* (= I. E. *a*), is frequently lost before *s* of the nom. sing. Thus we have *puer* for *puers* = *puerus*; *vir* for *virs* = *virus*; *famul* (Enn. Ann.) beside *famulus*; *damnas* for *damnats* beside *damnatus*; *Sallustis*, *Clodis*, &c. (on inscriptions), for *Sallustius*, &c. Similarly we have O. U. *pihaz* = L. *piatus*; O. U. *katel* = L. *catulus*; N. U. *termnas* = L. *terminatus*; N. U. *tertis* = *tertius*, *tertim* = *tertium*, just as in Old Latin *alis*, *alid*, = *alius*, *aliud*. We have also O. O. *tivtiks* = L. *tuticus*, *Pimpaiians* = L. *Pompeianus*, *hürz* = L. *hortus*, *Heirennis* = L. *Herennius*, &c.; N. O. *Bantins* = L. *Bantinus*.

Medial *u* is also lost in *stella* for *sterula*; *ampulla* for *amporula* from *ampora*; *corolla* for *coronula* from *corona*; *misellus* for *miserulus*; *lapillus* for *lapidulus* from St. *lapid*; *vincum* beside *vinculum*, &c. Similarly we have in Umbrian *Treblaneir* = L. *Trebulanis*, *vesclir* = L. *vasculis*, *pihaclu* = L. *piaculum*, &c., unless these be the original forms.

In Gothic we find *i* and *u* frequently omitted before a final *s*; thus we have *vulfs* (nom. sing. wolf) = Skr. *vrkas*, and similar nominatives; *broþhrs* (gen. sing.) = I. E. *bhrátras*, *namins* (gen. sing.) = L. *nominis*, &c.

#### §. 76. INSERTION OF A VOWEL.

We find a vowel inserted in the following cases: *drachuma* (Plaut.) = *δραχμή*, *sumus* for *esumus* = Skr. *smas*, *volumus* for *volmus*, *Tecumessa* = *Tecmessa*, *Hercules*, *Æsculapius*, *Patricoles*, where the neighbourhood of *l* or *m* determines the inserted vowel to be *u* or *o*; *techina* (Plaut.) = *τέχνη*, *Procina*, *Ariadine*, &c., where the inserted vowel is *i*, on account of the neighbouring *n*; *umerus* = Græc.-It. *omsos* beside Gr. *ὤμος*, and Skr. *amsa* (the shoulder), *ruber* for *rubros* = Gr. *ῥυθρός* = Skr. *rudhira* (blood, also with an inserted *i*), *gener* for *genros* = Gr. *γαμβρός*, *caper* = Gr. *κάπρος*, &c., in all which forms *r* determines the inserted vowel to be *e*. *I* is inserted in *moriturus* beside

*mortuus, oriturus* beside *ortus*, &c. Similarly in Oscan we find between a liquid and a following consonant the vowel of the preceding syllable inserted, as in *aragetud* (abl. sing.) = L. *argento*, *teremnis* = L. *terminus*, &c., just as in O. H. G. *puruc* for *purc*, Goth. *baurgs*, *waram* for *warm*, Goth. *varms*; and between a liquid and a preceding consonant the vowel of the following syllable is inserted, as in *pūtūrūpīd* gen. pl., utro-rumque), *pūtūrūspīd* (nom. pl. mas. utrique), *pūtēreipīd* (loc.

### §. 77. THE GUTTURALS.

*C* and *q* = I. E. *k*: *acus*, *acer*, *acupediis*, *ocior*, Skr. *as'ri* (the edge of a sword), *ás'u* (quick), Z. *aku* (a point) Gr. ἀκωκή, ἄκρις (a mountain-top), ὄκρις (a point), ὠκύς; *calo*, Gr. καλέω, E. *halloo*; *cella*, *celo*, *domi-cilium*, Skr. *s'álâ* (a house), Gr. καλιά (a hut), E. *hell*, *hole*; *cedo*, Gr. ἐκεκίδει (ὑπεκεχωρήκει, Hesych.), κεκάδοντο (Il. 15, 574), a redupl. aor. 2 of χάζομαι from R. χαδ = σχαδ = I. E. *skad*; *castus*, Skr. *s'udh* (to purify), Gr. καθάρως, Ch. Sl. *cistǔ* (clean); *cor*, Skr. *hrd* (heart), Gr. καρδία; *cerebrum*, *crista* (in capite stans), Skr. *s'iras* (head), Gr. κάρα, κρανίον; *carpo*, Gr. καρπός, E. *harvest*; *civis* = Osc. *kevs*, Skr. *s'î* (to lie), Gr. κεῖμαι, Goth. *hains* (κώμη), *heiva* (domus), &c.

*Qu* = I. E. *kv*: *quinque* = I. E. *kvankvan*, whence Skr. *pañ-kan* (five), Gr. πέντε, Æol. πέμπε, Ir. *coic*, W. *pump*; *quod* = I. E. *kvad* or *kvat*, whence Skr. *kat*, Gr. ποῦ, Ion. κοῦ, E. *what*, &c. In a few cases in Latin *k* may have had *u* developed after it, as in *quies* beside Skr. *s'î* (to lie), *squalor* beside Skr. *kâla* (black), and Gr. κελαινός, &c.; but in nearly all the cases where this development of *u* is supposed to have taken place, it is much more probable that *kv* had originally existed in Indo-European. In Old Umbrian we find *k*, and in New Umbrian *c* and *q* = I. E. *k*, except in the pronouns and numerals where *p* takes the place of I. E. *kv*: O. U. *ka-pres* = L. *capri*; N. U. *pequo* = L. *pecua*, &c. This *k* is

weakened to *ç* and *s* before *e* and *i*,\* as in N. U. *curnaçe* (abl. sing. of a noun corresponding to L. *cornix*) beside N. U. *curnaco* (acc. sing.); N. U. *paçe* and *pase* = L. *pace*, &c. In Old Oscan *k*, and in New Oscan *c* = I. E. *k*, except that *p* = I. E. *kv* in the same cases as in Umbrian: O. O. *l̥k̥it̥ud* = *licitud* = L. *liceto*; O. O. *sakarakl̥ud* (abl. sing.) beside L. *sacellum*, &c. *C* = I. E. *g* in N. O. *acum* (inf.) beside L. *ago*. In Old Umbrian, as has been already remarked, *k* represents L. *g*.

*G* = I. E. *g*: *ago*, *igitur* for *agitur*, Skr. *ag'āmi* (I go), Gr. ἄγω, O. N. *aka* (ago); *genus*,† *gigno* (*g*)*natura*, Skr. *g'an* (to be born), *g'anitū* (nom. sing. of St. *g'anitar*) = L. *genitor*, Gr. γένος, γίγνομαι, γείνομαι for γεννομαι, Goth. *keinan* (to germinate), O. H. G. *chind* (offspring); *grus*, γέρανος, E. *crane*; *gnosco*, (*g*)*notus*, *gnarus*, (*g*)*narrare*, O. L. *gnarigare*, Skr. *g'nā* (to know), Gr. γινώσκω, γινώσκός, O. H. G. *knāu* (I know), Goth. *kann* (I know), *kunths* (γνωστός) whence E. *uncouth*; *urgeo*, Skr. *varg'* (arcere), Gr. εἴργω, Λυκόοργος, Goth. *vrika* (ξίωκω), A. S. *vringan* (stringere), E. *wring*, *wrong*; *genu* = Skr. *g'ānu*, Gr. γόνυ, E. *knee*, &c. In New Umbrian and Oscan, *g* = I. E. *g*.

*G* = I. E. *k* in a few words: *digitus*, Gr. δάκτυλος, Goth. *tailō* (toe); *viginti* beside *vicies*, Skr. *viṃś'ati*, Gr. εἴκοσι, Bæot. *ἑκατι*; *triginta*, Gr. τριάκοντα; *gracilis* beside O. L. *cracentes* (graciles), Skr. *krś'a* (thin), Gr. κολεκάνος (long, lank), κολοσ-

\* *K* is retained in O. U. *akeruniamem*, N. U. *acersoniem*, O. U. *kebu* (cibo), and a few other cases; also in nominal stems of the *o*-declension that end in *-ko*, as N. U. *Naharce* (dat.), *Tesenocir*, (abl. pl.), except that we find O. U. *pupriçe* beside *puprike* (publico), and *pupriçes* beside *puprikes* (publici). We find *ç* sometimes before *l*, as in O. U. *tiçlu*, *ereçlu*, &c. Was this the beginning of that change which we see in Italian *chiamare* = L. *clamare*, *chiaro* = L. *clarus*, *occhio* = L. *oculus*, *piano* = L. *planus*, *piangere* = L. *plangere*, &c.? *K* is also found unaltered before *l* in O. U. *ehvelklu*, *fhlas*, &c.

† There probably existed, in I. E. times, as a side form of R. *gan*, *gvan*, as we find Gr. γυνή, Bæot. βανά for γFava, Goth. *gvēns* (θῆλυς), E. *quean*, *queen*, and perhaps L. *venter* for *gventer*.

σός for κολοκγος; *gubernator* beside Gr. κυβερνήτης; *Agrigentum*\* from Gr. Ἀκράγας; *negotium* = *necotium*; *pingo*, Skr. *piś* (to adorn), *pēs'alas* = Gr. ποικίλος; *ungulus*, *angulus* beside *uncus*, *ancus* (qui aduncum brachium habet), Skr. *añkas* (nom. sing. masc. the part above the hip), *añkus'a* (stimulus quo elephanti impelluntur), Gr. ὄγκος (a curve), ἀγκάλη (the (bent arm), ἀγκών; *cygnus* = Gr. κύκνος; *gurgulio* = *curculio*; *ilignus* from St. *ilec*; *salignus* from St. *salic*, Gr. ἑλίκη (the willow, in Arkadia); *dignus* connected by Curtius with *decet*, *decus*, Skr. *das'as* (glory), Gr. δοκέω, but by others with Skr. *dis* (to point out), Gr. δείκνυμι; *larignus* from St. *laric*; *langula* (a little dish), from St. *lanc*; *pango*, *pignus*, beside *paciscor*, *pax*, Skr. and Z. *pas* (to bind), Gr. πηγός (fast), πήγνυμι, πάσσαλος = πακγος, Goth. *fahan* (to seize), *fagrs* (εὐθερος); *gloria* from St. *clovos* = *clevos* = Gr. κλέφος = Skr. *s'ravas* (glory) from *s'ru* = Gr. κλυ; *gummi* = Gr. κόμμι; *gobius* = κωβιός; and a few other cases.† In all these cases where *k* is softened to *g*, it either begins a syllable or is in close proximity to *l*, *m*, *n*, or *r*.

*G* = I. E. *gh*: *fugio*, I. E. *bhugh*, Skr. *bhug'* (flectere) Gr. φεύγω, Goth. *biuga* (κάμπτω); *rigo*, Gr. βρέχω, Goth. *rign* (rain); *unguis*, Skr. *nakha* (a nail), Gr. ὄνυξ, from St. ὄνυχ; *jingo*, *figura*, I. E. *dhigh*, Skr. *dih* (to smear), *dēha* (the body), Gr. θιγγάνω, Goth. *deiga* (πλάσσω), O. H. G. *teig* (dough); *ango*, *angustus*, Skr. *añhu* (close), Gr. ἄγχω, ἄχος, Goth. *agvus* (close); *lingo*, *ligurio*, Skr. *lih* and *rih* (to lick), Gr. λείχω, Goth. *bilaigōn* (ἐπιλείχειν); *mingo*, *mejo*, Skr. *mih* (mingere), Gr. ὀμιχέω; *grando*, *suggrunda* (eaves), Skr. *hrádunī* (bad weather), *hrádinī* (lightning), Gr. χάλαζα for χαλαδγα, Ch. Sl. *gradŭ* (hail); *gratus*, O. and U. root *her* (to wish), Skr.

\* *Agrigentum* is the accusative of Ἀκράγας, and therefore must have been introduced at a time when the intercourse between Rome and Sicily was carried on without the use of writing.

† Consult Corssen über Aussprache, Vokalismus und Betonung der Lateinischen Sprache, p. 39, seq.

*haryâmi* (I love), Gr. *χάρις*, *χαίρω*, Goth. *faihu-gairns* (greedy of money); &c. In no case does an initial I. E. *gh* become L. *g*, except when succeeded by *r*, as in *gratus*, &c., and perhaps by *l*, if Grassman be correct in deducing initial *g* in *glisco*, *glaber*, and *glubo*, from an I. E. *gh*. In two cases *fr* appears to represent an I. E. *ghr*: *frio*, *frico*, Skr. *ghar* (to sprinkle), *gharsh* (to rub), Gr. *χοίω*; *fragro* a reduplicated form of R. *gra* = Skr. *ghrâ* (odorari).

Schleicher considers that in some cases *u* was developed after *g*, generally when a nasal, and sometimes when *r* preceded, as in *lungeo* beside Skr. *luñg'â* (a whore), Gr. *λαγάρως* (slack), *λάγνος* (lustful), and *urgueo* beside *urgeo*, Skr. *varḡ* (to exclude), so that *gu* = I. E. *g* or *gh*, and afterwards through assimilation of *g* to *v*, *v* alone remained, as in *nivis* for *nigvis* from *nix*. Now this development of *u* after *g* is extremely doubtful. In many cases *gu* most probably existed in Indo-European times, in others *u* is merely a suffix, while in others it seems to be inserted from a false analogy. Thus *u* was a suffix, to which afterwards a secondary suffix *i* was added, in *pinguis* beside Gr. *παχύς*, *brevis* for *bregvis*, beside Gr. *βραχύς*, *levis* for *legvis*, beside Gr. *ελαχύς* = Skr. *laghus* (light), &c. In the following cases we infer the existence of an I. E. *gu* or *ghu* from the related words: *voro* for *gvoro*, I. E. *gvar*, whence *gar* (to devour), Gr. *βορά*; *vivus* for *gvivus*, a reduplication of I. E. *gvi* whence Skr. *g'iv* (to live), Gr. *βίος*, E. *quick*. Again *u* may have arisen from a false analogy in *ninguit* beside *ningit* and *nivis* for *nigvis*, gen. sing. of *nix*, from I. E. *snigh*, whence Gr. *νίφα*, *ἀγάννιφος* for *ἀγασνιφος*, Lith. *snigti* (to snow), Goth. *snaivs* (snow); *urgueo* = *urgeo*; *anguis* beside Skr. *ahis* (nom. sing. masc., a serpent), Gr. *ἔχις*, *ἔγχελυς*, Lith. *angis* (a snake).

*H* = I. E. *gh*: *hospes*, *hostis*, O. L. *foetis*, Ch. Sl. *gostĭ* (guest), Goth. *gasts* for *gastis* (a guest), Lith. *gaspadà* (hospitium); *hērus*, *hēres*, O. L. *hir* (the hand), Skr. *har* (to seize), Gr. *χείρ*; *heri*, *hes-ternus*, Skr. *hyas* (yesterday), Gr. *χθές*, O. H. G. *gester* (yesterday); *hirundo*, Gr. *χελιδών*; *hiems*, *hibernus*, Skr.

*hima* (snow), Gr. χιών, χειμῶν; *helus*, *helvus*,\* Skr. *hari* (green), Gr. χλόη, O. H. G. *grōni* (green); *haruspex*, *hariolus*, *hira* and *hilla* (entrails), Skr. *hirā* (entrails), Gr. χολάδες, χορδή; *hortus* = Gr. χόρος; *haedus*, Gr. γοῖτα (Hesych. οῖς), Mod. Gr. γίδα, Goth. *gaitis* (a goat); *humus*, Gr. χαμαί (a locative from χαμα = I. E. *ghamā*); *homo* (connected with *humus*), O. L. *hemōnes* (nom. pl.), Goth. *guma* from St. *guman*, whence *-gum* in G. *Bräutigam* (bridegroom); *hio*, Gr. χαίνω, χάος, χειά (a hole), O. N. *gín* (I gape); *prehendo* for *præhendo*, *hedera*, *praeda*, perhaps for *præhida*, *hasta*, Skr. *husta* (the hand) (?), Gr. χανδάνω, E. *get*; *veho*, Skr. *vah* (to carry), Gr. ὄχος from R. *Feχ*, Goth. *vigs* (via); *traho*, perhaps connected with Skr. *drāgh* (adniti) and *dhrūgh* (posse), E. *drag*, which presuppose an I. E. *dhragh*. In the two last cases we have traces of the guttural in the perfects *vexi* and *traxi* for *vegsi* and *tragsi*. *Gh* passed through *f* in becoming *h*, as we see from the Old Latin forms *folus*, *foctis*, *fordus*, &c., for *holus*, *hostis*, *hordus*, &c. Similarly in Spanish, *h* represents L. *f*, as in *hijo* = *filius*, *hablar* = *fabulari*, *hierro* = *ferrum*.

*H* = I. E. *gh* in Oscan and Umbrian, as O. *herest*, U. *heriest* (volet) beside Skr. *haryāmi* (amo), and Gr. χαίρω.

*H* = I. E. *bh* in *mihi*, U. *mehe*, Skr. *mahyam*, beside *tibi*,\* Skr. *tubhyam*, and in *horda* beside *forda* (pregnant), from R. *fer* = Skr. *bhar*. Schleicher suggests that *amavi* for *amafui*, &c., passed through the stage *amahvi*, &c., and that the dat. pl. of the *a*-stems in *-īs* for *-ais* passed through the stage *-ihis* = I. E. *-abhyams*, but these cases are extremely doubtful. Grassman considers that *h* = *bh* in *herctum* or *horctum*. Festus tells us that *horctum* or *forctum* meant *bonum*; and Grassmann considering that it meant originally "what is heaped up," connects it with Skr. *bhrs'am* (multum, valde), with

\* Grassmann is mistaken in connecting L. *gilvus* with this root, for an initial I. E. *gh* followed by a vowel never becomes *g* in Latin, but always *h* through O. L. *f*. Lottner agrees with Grassmann, and connects L. *germen* also with the same root.

which he also connects L. *farcio*, *frequens*. Curtius, on the other hand derives *herctum*, *hercisco*, from a root *her* lengthened by *k*, connected with Skr. *har* (to take), Gr. *χεῖρ*, *χέρης*, L. *hir*, *hērus*.

*H* appears to represent an I. E. *k* in *hic*, from St. *hi-* = Goth. *hi-* = I. E. *ki-*, and in *habeo* = Goth. *haba* (I have). *Hic* (for *hice*) may be a reduplicated form of *ki-*, the original *k* perhaps appearing in the second syllable; compare *citra*, which may come from this root. Schleicher treats R. *hab* in *habeo* as a side form of R. *cap* in *capio*, and compares O. *hipn̄st* (*habuerit*) and *hafiēst* (*habebit*). He considers that *p* is weakened to *b* in *habeo*, just as in *bibo*, which he deduces from an I. E. *pipāmi*; this latter comparison is, however, extremely doubtful, as it is much more likely that the I. E. root began with *bh*, of which we still find a trace in Skr. *pibāmi*. *H* = I. E. *k* in Skr. *hṛd* (heart) beside Gr. *καρδία*, E. *heart*.

*H* in Umbrian and Oscan not only corresponds to L. *h*, as in O. O. *hurs* = L. *hortus*, &c., but it also takes the place of *c* and *p* before *t*, as in O. U. *scrēhto* = L. *scriptum*, *rehte* = L. *recte*, *subaktu* for *subactu*, and this again for *subagtu* = L. *subigito*, O. O. *ehtrad* = L. *extra*, *saahtim* = L. *sanctum*, N. O. \**Ohtavis* = L. *Octavius*, &c. The long vowels in Umbrian are written, *aha* or *ah*, &c.

Corssen considers that *h* has sprung from *y* in L. *ahenus*, beside Skr. *ayas* (iron); in *Mahestinus* (found on inscriptions) = *Majestinus*; and in O. U. *pihaz*, N. U. *pihos* = L. *piatus*, Volscian *pihom* = L. *pium*,\* beside Skr. *priya* (carus). *Hora* is borrowed from Gr. *ῥα*, which is connected with Z. *yāre* (year), E. *year*. If Pott is correct in treating *hornus* as = *ho-jornus*, as *biga* = *bijuga*, we find in it the original Latin form corresponding to Z. *yāre*, and E. *year*. *Hercules* (O. *Hereklo-*) is also

\* L. *pius* has been also connected with Skr. *pty* (conviciari in dial. véd.), Goth. *fijan* (to hate), E. *fiend*; L. *piare* is then explained to mean "to reconcile an enemy."

borrowed from Gr. Ἡρακλῆς; it has nothing to do with a Latin verb *hercere*, which cannot be = Gr. ἔρκειν, for Greek spiritus asper = I. E. *s*; Mommsen erroneously connects the Greek and Latin verbs, and considers Hercules to be a Ζεὺς ἐρκεῖος.

An inorganic *h* is added to *humerus* for *umerus*, Gr. ὤμος = Skr. *ansas* (nom. sing. masc.), Goth. *amsa*, all of which forms point back to an I. E. *amsas*, whence came a Græco-It. *omsos* or *omesos*, of which latter form we find a trace in Gr. ἀμέσω (Hesych., the shoulder blades). Also *humor* = *umor*, connected by Curtius with Gr. ὑγρός Skr. *uksh* (humectare). Similarly we find *h* added in Sp. *hedrar* = L. *iterare*, Fr. *haut* = L. *altus*.

#### §. 78. THE PALATAL *J*.

*J* = I. E. *y*: *jecur*, Skr. *yakṛt*, and in the weak cases *yakan* (the liver), Gr. ἥπαρ from St. ἥπαρ; *jugum*, Skr. *yugam* (par), Goth. *juk*, O. H. G. *joch*; *jus*, Skr. *yúsha* (pease soup), Gr. ζωμός (soup); *juvenis*, Skr. *yuvan* (young), E. *young*; *jam*, Goth. *ju* (now). Lith. *jau* (now); &c.

I. E. *y* is often vocalised in Latin: *medius* = Skr. *madhyas*; *siem* = Skr. *syám*, Gr. εἶην from I. E. *asyám*; &c.

#### §. 79. THE DENTALS.

*T* = I. E. *t*: *ante* (for *anted*, an ablative form found in *antidea*), Skr. *anti* (before), Gr. ἀντί; *stella* (for *sterula*), Skr. *staras* (the stars, in dial. Ved.), *târâ* (a star), Gr. ἀστήρ, *τείρεα*; *et*, *at*, in *at-avus*, Skr. *ati-* (ultra), Gr. ἔτι; *vetus*, Skr. *vatsara* (a year), Gr. ἔτος; *peto*, *penna*, O. L. *pesna* for *petna*, Skr. *pat* (to fly), Gr. πέτομαι; *sto*, Skr. *sthâ*, Gr. ἵστημι; *sterno*, *torus* for *storus*, Skr. *star* (sternere), Gr. στόρνυμι; *tendo*, *teneo*, *tenuis*, Skr. *tan* (to stretch), Gr. τάννυμαι, *τείνω*, Goth. *thanya* (I extend): *tu*, Skr. *tvam* (thou), Z. *túm* (thou), Dor. *τύ*, Bœot. *τούν*, Goth. *thu* (thou); *tuli*, O. L. *tulo*, *tetuli*, Skr. *tul* (to lift), Gr. τλῆναι, *τελαμών*, *τάλας*, Goth. *thula* (I endure);

*termen*, *in-tra-re*, *trans*, U. *traf* = L. *trans*, Skr. *tar* (to cross), Gr. *τέρμα*, E. *through*, &c.

*St* = I. E. *sk* in *stercus*, Skr. *s'akṛt*\* (stercus), Gr. *σκώρ* from *St. σκαρτ*, *στεργάνος* (Hesych. *κοπρών*), *σπαρίλη* (excrement), A.S. *skearn* (dung); *sturnus*, Gr. *ψάρ* for *σπαρ*, *ἀστραλός* (Hesych. ὁ ψαρὸς ὑπὸ Θεττάλων), A. S. *stearn*, Bohem. *škorec* (a starling), where Curtius believes *sk* to be original, *talpa* for *stalpa*, Gr. *σπάλαξ*, *σκάλοψ* (a mole); *talla* (caepae putamen) is, according to Curtius, for *stalla*, and comes from an I. E. R. *skal*, whence G. *schale* (husk, rind), &c.

*St* = I. E. *sp* in *studium*, Gr. *σπουδή*, E. *speed*; *turgeo* for *sturgeo*, Gr. *σπαργάω*, *σφριγáω* (I swell, burst), perhaps connected with *σφάραγος* (a noise), Skr. *spurg'* (to make a noise); and perhaps one or two other doubtful cases.

*T* never = I. E. *dh* (except in the case of the initial group *tr*, as in *traho*). All the examples brought forward to prove the contrary can be easily explained without such a supposition. Thus, *rutilus* is for *rudtilus*, from R. *rud* = Skr. *rudh*, and *-tilus* is the same termination as is found in *futillis*, *mutillus*, &c.; *pati* and Gr. *παθεῖν*† are both independent formations from a root *pa*, *πα*, which bears the same [relation to *πεν* (in *πένομαι*) and *πον* (in *πονέω*) as *γα* (in *γεγαώς*) does to *γεν* (in *ἐγενόμην*) and *γον* (in *γέγονα*) and *τα* (in *τάνυμαι*) to *τεν* (in *τείνω*); *putāre* is not connected with *πύθεσθαι*, for the latter comes from I. E. *bhudh*, whence Skr. *budh* (to know), and the former from L. *putus* (clean), beside Skr. *pú* (to clean), *putare* therefore signifying "to make clean" (compare *amputare*, *lanam putare*), and then "to make clear;" *pūtēre* and *πύθεσθαι* are independent formations from

\* Bopp considers that *s'* in *s'akṛt* represents an original *k*, and connects it with Gr. *κόπρος* for *κοκρος*, L. *caco*, &c. Curtius connects *κόπρος* with *καπύω*, *καπνός*, &c. All the comparisons in this section and the succeeding one are extremely doubtful.

\* Lottner and others, however, identify *t* in *lateo*, *patior*, with *θ* in *λαθεῖν*, *παθεῖν*, and consequently infer the existence of the hard aspirates in Indo-European.

R. *pū*, connected with Skr. *pūyē* (putresco), Z. *pū* (to stink), and Goth. *fuls* (foul); the connexion of *lateo* with λαθεῖν is not so easily explained as the last examples, for we find Skr. *rah* (to leave), and *rahas* (a secret, or secretly), which point back to an I. E. *radh*, but it is likely that *latere* is formed from a R. *la*, as *pūtere* is from R. *pū*.

*D* = I. E. *d*: *do*, *dāre*, Skr. *dā* (to give), Gr. διδωμι; *dexter*, Skr. *ākṣhiṇa* (dexter), Gr. δεξιός, Goth. *taihsvō* (δεξιά); *duo*, Skr. *dva*, Gr. δύο, Goth. *tvai*; *domus*, Gr. δόμος, A. S. *timber*; *suadeo*, *suavis* for *suadvis*, Skr. *svad* (to please), *svādus* = Gr. ἡδύς; *sedeo*, Skr. *sad* (to sit), Gr. ἕζομαι for ἰδγομαι, &c.

*D* = I. E. *t* in *quadraginta* from *quatuor*.

*D* = I. E. *dh*: *medius* = Skr. *madhyas*, Gr. μέσος for μεθυσ, Goth. *midjis* (medius); *aedes*, *aestus* for *aedtus*, Skr. *indh* (to burn), Gr. αἶθω, ἴθῆ (Hesych. ἐφροσύνη), perhaps Αἶρην and Ἥφ-αιστρος; *do* in *condo*, *credo*, *abdo* is connected with Skr. *dhā* (to place) = Z. *dā*, Gr. τίθημι; *vidua*\* = Skr. *vidhavā* from *vi-* (without), and *dhava* (vir); &c.

*D* may be = I. E. *y* in *tendo* = Gr. τείνω for τευγω, Goth. *thanja* (I stretch); in *fendo* = Gr. θείνω for θευγω; and perhaps in the part. term. *-endus* or *-undus* = I. E. *-anyas* = Skr. *-anīyas*. In Zend we find the corresponding termination *-énya* in *verezénya* (working), from R. *verez* = Gr. Φεργ. In Oscan *ny* perhaps became *nn*, as in O. O. *upsannam* = L. *operandam*: in Umbrian also *ny* became *nn* or *n*, as double consonants are generally not both written in Umbrian, as in N. U. *pihaner* = L. *piandi* (gen. sing.), &c.

*D* = Gr. λ and ρ in the two borrowed words, *adepts* and *caduceus*, from Gr. ἄλεια and καρύκειον. We also find *d* for *l* in *Capitodium*, a side-form of *Capitolium*, for *Capitālium*, *ā* becoming *ō* as in *ignōro* beside *gnārus*, &c. *Cadamitas*, a side-form of *calamitas*, is generally supposed to be original, but it is much more likely that *calamitas* is the older form. *Calamitas* means "destruction of the *calami*;" thus we are

\* It is better, however, to derive *vidua* from the R. *vid* (to separate).

told (Serv. Verg. Georg. I. 151), *Robigo, genus est vitii, quo culmi pereunt, quod a rusticanis calamitas dicitur*. *Calamitas* is formed from St. *calamo* by means of the suffix *-tat-*, just as *civitas* is from St. *civi*, &c. If on the other hand *d* is original in this word, we would first have to form from *cado*, from which it is derived, the St. *cadamo*, but as the Romans never kept *ā* before the suffix *-mo*, but always changed it into *u* or *i*, this supposed stem is foreign to the Latin, and 'most probably never existed. That *l* sometimes became *d* in vulgar Latin is shown by *vodeba* on an inscription at Pompeii for *vo-lebam*.

*D* in Old Umbrian, when initial, was represented by *t*, and in New Umbrian by *d*; when medial or final it was in Old Umbrian changed into a sonant hissing sound, represented by *q* (*r̥*), which in New Umbrian became *rs*. Thus we have N. U. *dur* = L. *duo*; N. U. *dupw̄sus* (bipedibus) from *purs-* = L. *ped-*; O. U. *asam-ar* = L. *aram-ad* (ad aram); O. U. *arveitu* = L. *advehito*; N. U. *virseto* = L. *visus* from R. *vid*; O. U. *pere*, *p̄iri*, N. U. *perse*, *p̄irsi* = L. *quid*, with the same *i* attached as is found in Gr. *-ι (οὐροσ)* compare Lith. *-ai* (tas-ai); O. U. *tera*, N. U. *dersa* = *didat* (det), a reduplicated form of R. *da*, &c. We find *r̥* for initial *d* in O. U. *r̄ere* = L. *dedit* (3 sing. perf.) and *r̄unum* = L. *donum*, but these forms may be, as Schleicher suggests, only dialectic.

In Oscan *d* = L. *d*; it is also retained in some cases where *l* is found in Latin. Thus we have O. O. *p̄ud*, N. O. *pod* = L. *quod*, O. O. *p̄id* = L. *quid*; N. O. *deicans* (3 pl conj. pres.) = L. *dicant*; O. O. *dedet* = L. *dedit*; O. O. *Akudumniad* = L. *Aquiloniā(d)*.

*R* = I. E. *r*: *aro*, Gr. ἀρόω, Goth. *arjan* (to plough); *orior*, Skr. *ar* (to move), *ārta* = Gr. ἄρτο, Gr. ὄρνυμι; *rivus*, *Rumo*, (the old name of the Tiber), Skr. *sru* (to flow), Gr. ῥέω; *fero*, Skr. *bhar*, Gr. φέρω; *ruber*, Skr. *rudhiram* (nom. neut. blood); *-tor*, *-ter*, = Skr. *-tār -tar*, as *dator* = Skr. *dātā* for *dātārs*, *pater* = Skr. *pitā* for *patars*; *rēs* = Skr. *rās* (divitiæ) from St. *rāi*; &c.

*R* = I. E. *d* in *arbiter* for *ad-biter* and *arcesso*. In Old Latin *r* is frequently found for *d*, as in *arvenas* (Prisc. I. 45), for *advenas*, *arvorum* (Sc. de Bacc.) for *advorsum*, *arfuisse* (Sc. de Bacc.) for *adfuisse*, &c. Even *apor* and *ar* were used for *apud* and *ad*. This is similar to the change of *d* into *r* in Old Umbrian.

The Latin language, however, afterwards recovered itself from this weakening of *d* to *r*, and restored *d*, except in *arcesso*, *arbiter*, and *meridies* where *r* = *d* = I. E. *dh* as *medius* = Skr. *madhyas*. *R* in *mirus* is not developed from *d*, as is asserted by those who look upon *r* as belonging to the root, and compare it with Gr. *μειδάω*, but *-ro* is a suffix, found also in *clarus*, &c., and *d* does not belong to the root in *μειδάω*; these words are probably independent formations from the I. E. R. *smi* = Skr. *smi* (to laugh), whence also O. H. G. *smielen*, *smieren*, (to laugh), E. *smile*, Lett. *smeeti* (to laugh).

*R* = an older *n* in *crepusculum*, *creperus* (dubius), beside Gr. *κνέφας*; *groma* borrowed from Gr. *γνώμων*. Leo Meyer also derives *germen* from R. *gen*, and *carmen* from R. *can*; but in both cases he is entirely wrong. Curtius connects *germen* with Skr. *garbha* (uterus, foetus), Z. *garewa* (foetus), Gr. *δελφύς* (uterus); *βρέφος*, from I. E. *grabh* (concupere), whence Skr. *grah* (capere); *germen* would therefore be for *gerbmen*. *Carmen* is for *casmen*, compare *Cusmenae*. We find *r* representing an older *n* in Fr. *diacre* (= diaconus), *Londres, ordre* (= ordinem); Sp. *hombre* (= hominem), *fembra* (= femina), &c. Conversely in Wall. *suspina* = *suspirare* we find *n* for *r*. It is a mistake to identify the *n*- with the *r*-suffixes in *ὕδωρ* beside Skr. *udan* (water); in L. *jecur*, Gr. *ἥπαρ*, Skr. *yakṛt* beside Skr. *yakan* (from which the weak cases of *yakṛt* are formed), Lett. *aknis* (the liver); in Skr. *s'akṛt*, Gr. *σκόρ*, L. *stercus*, *stercor-is* beside Skr. *s'akan* (from which the weak cases of *s'akṛt* are formed), for we frequently find these suffixes coexisting in the same language,

and sometimes in the same word: thus, we have Gr. ὕδνης (watery) beside ὕδωρ, the former word being formed from R. υδ by means of the suffix -να; in L. *jecinoris*, gen. sing. of *jecur*, we find both suffixes coexistent; and similarly we find both in A. S. *skearn* (dung) = σκώρ and A. S. *stearn* = L. *sturnus*.

*L* = I. E. *r*: *loquor*, Skr. *lap* (to speak), Gr. ἑλάκων, Ch. Sl. *reka* (to speak); *linguo* Skr. *rik'* (to separate), Gr. λείπω; *luceo*, Skr. *ruk'* (to shine), Gr. λευκός, λύχνος; *sollus* = Skr. *sarvas* (all); *culter*, *cultus*, Skr. *kartarî* (shears), Gr. κείρω; *plenus* = Skr. *pūrṇas* (full); *luceo*, Gr. λάκος, ῥάκος, Æol. βράκος from R. *Ἐρακ* = Skr. *vras'h'* (scindere); *latus* for *platus* beside Skr. *prath* (extendere); *gallus* for *garlus* beside *garrio*, Skr. *gar* (to call), Gr. γῆρυς; *gula*, *gur-gul-io* beside *gurgēs*, (g)*voro*, Skr. *gar* (to swallow); *volo*, Skr. *var* (to choose); *vulgus*, Skr. *vargas* (nom. sing. masc. a multitude); *vellus*, Skr. *úrṇâ* (wool), Gr. ἔριον, Ion. ἔϊρος, &c.

*L* = I. E. *l*: see § 21.

*L* = I. E. *d*: *lacrima*, O. L. *dacruma*, Gr. δάκρυ, Goth. *tagr*, O. H. G. *zahar*; *levir*, Skr. *dēvar* (husband's brother), Gr. δαίρη, A. S. *tācor*, O. H. G. *zeihhur*; *lingua*, O. L. *dingua*, Goth. *tuggō*, O. H. G. *zunga*; *impelimenta* (in Festus) = *impedimenta*; *ol-facio*, *oleo* beside *odor*, Gr. ὄζω = ὀδύω, ὀδῶδα; *lautia* (entertainment) beside *dautia*, which Aufrecht connects with Skr. *dūta* (nuntius); *Ulixes* = Ὀδυσσεύς; *lignum* connected by Bopp with *dah* (to burn), Gr. λιγνύς (thick smoke mixed with flame); but Curtius prefers to follow Jos. Scaliger in deriving it from *legere* (to gather), whence *legumen*, &c., *lignum* would then mean "a bundle of sticks;" *limpidus* connected by Bopp with Skr. *dīp* (to shine), but by Curtius with Gr. λάμπω, Ὀλυμπος; *lacero* connected by Bopp with Skr. *dañs'* (to bite), Gr. δάκνω, but much more probably from R. *lac* = Gr. *Ἐρακ*; *pol-lingo*, *lino* beside Skr. *dih* (to smear); *larva* (a mask) connected with Skr. *dars'* (to see), Gr. δέρκω; *laurus* for *daurus*, Skr. *druma* (a tree), *dāru* (wood), Gr. δρῦς, δόρυ; *-ilius* (in *Popi-*

*lius*, &c.) = *idius*\* (in *Popidius*, &c.); *delicare* beside *dedicare*, *-sul* (in *consul*, &c.) is generally connected with R. *sed*, whence *sēdeo*, *sella* for *sedla*, *sēdes*, *solium*, but Mommsen connects it with *salire*, and Corrsen with Skr. *sar* (to go). In Oscan we find *d* kept between vowels, where in Latin *l* is found, as in O. O. *Akudunmiad* = L. *Aquiloniā* (*d*), O. U. *Akeruniam-em*, N. U. *Acersoniam-e* (in *Aquiloniam*), the modern *Acedogna*.

*L* appears to represent an I. E. *n* in a few cases: *lendes* for *clendes* beside Gr. *κονίδες* (eggs of lice, nits), A. S. *lnit*, Lith. *glindas*, for no word in Latin can begin with *cn*; *pulmo* beside *πνεύμων*. For a similar change in other languages consult § 54. Although L. *alius*, Gr. *ἄλλος*, Goth. *alis* (*ἄλλος*) are generally connected with Skr. *anya* (another), it is more likely that there were originally two independent pronominal stems, *al* and *an*; from the former of which came L. *alius*, &c.; and from the latter Skr. *anya*, Gr. *ἔνιοι*, Goth. *anthar* (*ἄλλος*), Ch. Sl. *inŭ* (*alius*). *Pulmo* and *lendes* appear therefore to be the only Latin words where *l* = I. E. *n*. The opposite change never occurs in Latin, though it does sometimes in Greek, as Dor. *βέντιστος*, &c., = *ἑλτιστος*, &c., *νάρναξ* (Hesych. a chest) = *λάρναξ*.

*S* = I. E. *s*: *sum*, *est*, Skr. *asmi* (*sum*), *asti* (*est*), Gr. *εἰμί*, Æol. *ἔμμι* = *ἔσμι*, *ἐστί*, Goth. *im*, *ist*, Lith. *esmi*, *ėsti*, Ch. Sl. *jesnŭ*, *jestŭ*; *uro*, *ustus* from R. *us* = Skr. *ush* (to burn), Gr. *εὔω*; *septem* = Skr. *saptan*, Gr. *ἐπτά*; *sto*, R. *sta* = Skr. *sthā* (to stand), from I. E. *sto*; *-s* (term. of nom. sing.) = I. E. *-s*, as in *equus* = Skr. *as'vas* = Gr. *ἵππος*, &c.; O. L. *sum*

\* As we find O. U. *famerias*, *karitu*, *Pumperias* beside L. *familia*, *calare*, *Pompilia*, it has been suggested (Die Umbrischen Sparchdenkmäler von S. Th. Aufrecht und A. Kirchhoff, p. 84) that the original forms of these words had *d* in place of *r* and *l*, as O. U. *r* = I. E. *d*. I cannot assent to this view as far as relates to *familia* and *calare*, for *fumilia* is from *famulus*, which is formed from a St. *fama*, as *humilis*, from St. *humo*, and *calare* is connected with Gr. *καλέω*, G. *hallen*. *R* was, perhaps, written for *r* by a mistake of the stone-cutter in these two cases.

(him), *sam* (her), Skr. *sa*, *sá* = Gr. *ὁ*, *ἡ*, &c. *S* is retained in Umbrian and Oscan, where it is found in the corresponding Latin words, and also in other cases where it is either lost or changed into *r* in Latin. Thus we have O. U. *tutas Ijuvinas* (gen. sing.) = L. *totæ Iguvinæ*, *kaprēs*, *katlēs* = L. *capri*, *catuli*, O. O. *pūmpaiiancis* = *pompeiani*, N. O. *etuās* (gen. sing. *pecunie*). The *a*-stems in Oscan and Old Umbrian still retain the final *s* in the nom. pl.: O. O. *Nūvlanis* = L. *Nolani*, N. O. *pas*, *scriptas* = L. *quæ*, *scriptæ*, O. U. *urtas* = L. *ortæ*. In New Umbrian this final *s* has generally become *r*; *screihtor* (nom. pl.) = L. *scripti*, *totcor* (nom. pl.) = L. *tutici*, *motar* (nom. pl.) = L. *multæ* (pœnæ), *totar* (gen. sing.) = L. *totæ*, *popler* (gen. sing.) = L. *populi*. In New Umbrian final *s* is still kept in the dat. and abl. pl. of the *i*-stems, as in *aveis* = L. *avibus*. In Old Umbrian and Old Oscan the change of final *s* into *r* had already begun in the passive voice, as O. U. *emantur* = R. *enantur*, O. O. *sakarater* = L. *sacratum*, &c. *S* is generally kept between two vowels in Oscan and Umbrian, as in U. *asa* = L. *ara*, O. O. *aasas* = L. *aræ*. In Oscan *s* became a sonant *s*, represented by *z*, between two vowels in certain cases, as in *-azum* (term. of gen. pl.) = L. *-arum* = I. E. *-āsām*, *censazet* for *censasent* (censebunt), &c. Final *ts* was represented by *z* in Old Umbrian and Old Oscan, and by *s* in New Umbrian, as O. U. *pihaz* = N. U. *pihos* = L. *piatus*, O. O. *hürz* = L. *hortus*, &c. In Umbrian an original *k* is generally weakened to a sibilant before *e* and *i*, as in *pase* = L. *pace*, *desenduf* = L. *duodecem*, *çesna* = L. *cena*, &c.

*N* = I. E. *n*: *in-* (neg. prefix), Skr. and Z. *an-*, *a-*, Gr. *ἀν-*, *ἀ-*, O. and U. *an-*, *a-*; *inter*, *indu*, Skr. *antar* (within), Gr. *ἐνδον*, *ἐντερον*, O. U. *anter*, N. U. *ander*; *mens*, *maneo*, Skr. and Z. *man* (to think), Gr. *μένω*, *μένος*; *navis*, Skr. *nāus* = Gr. *ναῦς*; *novus*, Skr. *navas* = Gr. *νέφος*, O. O. *Nivla*; *ne*, *non*, Skr. and Z. *na* (not), Gr. *νη-* = Ved. *ná*; term. *no-* (in *plenus*, *somnus*, &c.) = Skr. *na-* (in *pūrṇa*, &c.); term. *men* (in *nomen*), &c.) = Skr. *man* (in *nāman*, &c.); &c.

*N* = I. E. *m* in a few cases : *nonus* for *novimus* from *novem*, as *decimus* from *decem*, &c. ; *gener* for *gemer* beside Gr. γαμβρός, although it may come directly from R. *gen* (to produce); *tenebræ* beside Skr. *tamisra* (darkness), O. S. *thim* (dim), O. H. G. *demar* (crepusculum), Ir. *temel* (dark). Some writers consider that *n* = *m* in *venio* beside Skr. *gam* (to go), *janitrix* beside Skr. *gāmātar* and *yāmātar* (gener), and *aeneus* = Skr. *ayasmayas* (ferreus), but these comparisons are extremely unlikely : consult §. 54.

## §. 80. THE LABIALS.

*P* = I. E. *p* : *super*, Skr. *upari* (above), Gr. ὑπέρ, Goth. *ufar* (over); *plus*, *plerique*, Skr. *puru* (much), Gr. πολύς, Goth. *filu* (πολύς); *potis*, *potior*, *potens*, Skr. *pati* (a master), Gr. πόσις; *pluit*, *pluvia*, Skr. *plu* (to swim), Gr. πλέω, πλύνω, O. H. G. *fliozan* (to flow); *pons*, Skr. *patha* (a way), Gr. πάτος, O. N. *fatt* (ibam); *per*, O. *perum* (outside), Skr. *parā* (away, Z. *para* (outside), Gr. παρά, Goth. *fra*—; *porta*, *ex-per-ior*, Skr. *par* (to cross), Z. *par* (to bring over), Gr. πόρος, περάω, Goth. *faran* (to go); *serpo*, Skr. *sarp* (to creep), Gr. ἔρπω; &c.

*P* perhaps represents an I. E. *bh* in *potus*; consult §. 55.

*Sp* in Latin has in no case been developed from an older *st*. *Spica* and *spiculum* are not connected with Gr. στάχυς, but rather with O. N. *spiot* (hasta), G. *spies* (a spear), *spitze* (a point); perhaps Gr. πικρός and ἔχπευκής (pointed) belong to the same root. *Spatium* = Æol. σπάδιον is connected with Gr. σπάω, O. H. G. *spannan*, and Gr. στάδιον is a later form. *Spuo* is connected with Gr. πτύω, L. *pituīta*, Goth. *speīva* (spuo), Lith. *spjauju* (spuo). We find σπ = an original στ in Æol. σπολά = στολή, κασπολέω = καταστελῶ, where στ is original, as we see from L. *praestolor*, O. H. G. *stellan* (to place), E. *stall*. We also find Goth. *sparva*, O. H. G. *sparo* beside Gr.

στροῦθος. We find *sp* beside Gr. σκ in *spolium* beside Gr. σκῦλον, where σκ is original. We also find *specio*, *specto* beside Gr. σκέπτομαι for σπεκτομαι from I. E. *spak*, whence Z. *s'pas'* (to behold), Skr. *pas'* (to see), E. *spy*.

In Umbrian and Oscan *p* = I. E. *kv* and L. *qu* in the pronouns and numerals and words derived from them, and perhaps, in some other cases. Thus we have O. U. and N. U. *pis* = L. *quis*, O. O. *pid*, N. O. *pod*, = L. *quod*, N. O. *pomtis* = *quinque*, N. U. *peturpursus* = L. *quadrupedibus*, N. U. *panta* = L. *quanta*, &c. Hence when we find *p* = I. E. *kv* in any Latin word, we may infer that that word is borrowed from either Umbrian, Oscan, or Sabine. Corssen\* believes that *p* has been developed from an I. E. *kv* within the limits of the Latin language; but the examples by which he supports this view are either extremely doubtful or susceptible of another explanation. Curtius† also asserts that L. *p* has arisen from an Older *k* in *sapio*, *lupus*, *Epona*, *trepit*, and *saepio*, comparing these words with *sucus*, Gr. λύκος, *equus*, *torqueo*, and Gr. σηκός. Now *sapio* has nothing to say to *sucus*, but is connected with O. II. G. *sab* (to understand), whence *ant-seffan* (Præt. *ant-suob*), and Gr. σοφός and σαφής, where φ represents an older π; *lupus* is most probably a Sabine word, but Schleicher connects it with Z. *urupis*, *raopis* (a kind of dog), and derives it from R. *rup* or *lup* (to tear); *saepio* does not agree with σηκός in the vowel of the root for Gr. η = I. E. *ā* and L. *ae* = I. E. *ai*; *Epona* is a Keltic term; *trepit* (vertit) and Gr. τρέπω are, perhaps, formed from a root *tar* by the suffix *p*, and *torqueo* from same root by the addition of a different suffix. Corssen adds to these examples *popina*, *palumbus*, *opinari*, comparing them with *coquina*, *columba*, and Gr. ὄσσεισθαι for ὀκγεσθαι. Now *popina* and *palumbus* are most likely borrowed words, as we have beside them the genuine Latin form, *coquina* and *columba*, just as we have Osc. Πομπ-

\* Kritische Nachträge zur Lateinischen formenlehre, p. 29.

† Grundzüge der Griechischen Etymologie, p. 408.

*τιος* = L. *Quinctius* beside L. *Pompejus* (borrowed from Oscan) and *Petrejus* from Osc. *petora* (four). The connexion of *opinari* with ὄσσεσθαι is very doubtful; Curtius assents to Crain's suggestion that an initial *kv* has been lost, and that it comes from the same root as Gr. καπύω, L. *vapor* for *kvapor*, Lith. *kvapas* (smoke). *Limpidus* is considered by Schleicher to be a dialectic form of *liquidus*; Bopp, however, connects the former with Skr. *dīp* (to shine), Gr. λάμπω, and the latter with Skr. *li* (liquefacere). Curtius connects *liquēre*, *liquidus* with Skr. *rik'* (to separate), Z. *ric* (to leave, to pour out), L. *linguo*, &c.

*B* = I. E. *b* in *brevis* for *bregvis* beside Gr. βραχύς, and *labi* beside Skr. *lamb* (to fall), and a few imitative words: consult §. 22.

*B* = I. E. *gv*: *be-tere*, *ar-bi-ter*, *venio* for *gvenio*, N. U. *benust* = O. U. *benus* (3 sing. fut. ex.) from R. *ben* (to come), Skr. *gû* (to go), Goth. *guiman* (to come); *bos*, Skr. *gâus* (nom. sing. *bos*), Gr. βοῦς, γαῖος (ὁ ἐργάτης βοῦς, Hesych.) O. H. G. *chuo* (cow); *bōvare*, *re-boare*, Skr. *gu* (to sound), Gr. βοή, βοάω, γόος, γοάω, γόης; *super-bus*, Skr. *g'i* (to conquer), Gr. ὑπέρβιος, from I. E. *gvi*, whence, perhaps, also come Gr. *ἒς*, *ισχύς*, Lac. βίσχυς, L. *vis* for *gvis*; *bullio* connected by Bopp with Skr. *gval* (flammare).

*B* = I. E. *bh*\* (when medial): *amb-*, Skr. *abhi* (towards), Gr. ἀμφί, O. S. *umbi*, O. H. G. *umpi*; *ambo*, Skr. *ubhâu* (both), Gr. ἄμφω, Goth. *bai* (both); *nubes*, *nebula*, Skr. *nabhas* (aer, coelum), Gr. νέφος; *umbilicus*, Skr. *nâbhi* (the navel), Gr. ὀμφαλός; *orbis*, Gr. ὀρφανός; *labor*, Skr. *rabh* (desiderare), Gr. ἡλφον (I acquired), ἀλφηστής, Goth. *arbaihts* (toil); *-brum* (in *candelabrum*, &c.) from I. E. *bhar* = Skr. *bhar* (to carry); *imber*, Skr. *ambhas* (water), *abhra* (clouds), Gr. ὄμβρος; *-bus*

\* Benary connects L. *ebur* with Skr. *ibha* (an elephant), from which he also derived Gr. ἐλ-ίφας by prefixing the Semitic article. Others derive ἐλίφας from Heb. *eleph* (an ox), as, in Old Latin, the elephant was called *bos Lucas*.

(term. of dat. pl.) = Skr. *-bhyas*; *-bam*, *-bo* (in *amabam*, *amabo*, &c.) for *-fuam*, *-fuo* from I. E. *bhú* (to be); &c.

*B* is never = I. E. *bh* (when initial), except in *bibo*, respecting which consult §. 55. Bopp indeed connects *bacca*\* with Skr. *bhaksh* (to eat), and suggests that *bucca* comes from the same root, unless it belongs to Skr. *mukha* (the face)! He also connects *brachium* with Skr. *bâhu* (the arm), Gr. *πῆχυς*, I. E. *bhāghu*. These examples are, however, so doubtful that we cannot conclude that L. *b* is ever = I. E. *bh*, except in *bibo*.

*B* = I. E. *dh* (when medial): *ruber*, *robigo*, Skr. *rudhira* (blood); *uber* for *ouber*, Skr. *údhas* (*uber*), Gr. *οὔθαρ*, O. H. G. *ūtaz*, A. S. *ūder*; *uber* (rich) for *oiber*, Skr. *édhatê* (he increases), from R. *idh*; *verbum*, U. *verfale* (= verbale), Goth. *vaurd* (a word), G. *wort*, Lith. *vàrdas* (a name); *barba*, G. *bart*, E. *beard*; *robur*, connected by some with Skr. *rádth* (perficere), but by Bopp with Skr. *ruh* (crescere) for *rudh*. Other examples of this change have been adduced, but in each case a better explanation of the L. *b* can be given: *liber* has nothing to say to Gr. *ἐλεύθερος*, for we find O. L. *loebesom* = *liberum*, which is connected with Skr. *luh* (to desire), Gr. *λίψ* (*ἐπιθυμία*, Hesych.), *λίπτομαι*, Goth. *liuhs* (loved), while the old derivation of *ἐλεύθερος*, *παρὰ τὸ ἐλεύθειν* ὅπου *ἐρεῖ*, is probably correct; *plebes* and Gr. *πληθος* are independent formations from the root *par* (to fill), and L. *b* is not Gr. *θ* here; *urbs* is not connected with Skr. *ardha*, for the latter meant originally *half*, and then it came to mean *side*, as G. *halbe* means both *half* and *side*; the term. *-brum* should

\* Corssen (Kritische Nachträge zur Lat. Form. p. 33) connects *bacca* with Skr. *pak'* (coquere, maturescere), and considers *bacca*, therefore, to be for *pacca*. In no case, however, except in a few words borrowed from the Greek, does initial *b* in Latin represent an I. E. *p*; besides, Skr. *pak'* is connected with L. *coquo*, Gr. *πίπτω*, ἀρτο-κόπος, Ch. Sl. *peka* (I cook), Lith. *kepù*, and all these forms seem to point back to an I. E. *hvakh*. *Bucca* is also connected by Corssen with Skr. *bukh* (latrare, loqui); this is explaining *obscurum per obscurius*.

not be identified with Gr. *-θρον*, for the latter was originally *-τρον* and the former belongs to Skr. *bhar* (to bear). *Libra* is, perhaps, borrowed from *λίτρα* (for *τλιτρα* beside *τλάω*, as *L. latus* for *tlatus*) through *λιθρα*, or else *λίτρα* is borrowed from *libra*, the term *-bra* being connected with Skr. *bhar* (to bear).

*B* is never = I. E. *gh*. The only example adduced in proof of this change is *bilis*, which is wrongly connected with Gr. *χόλος*, *χολή* (gall, anger), O. H. G. *galla* (gall). *L. fel*, *fell-is*, is the true Latin representative of *χόλος*.

*B* = I. E. *dv* : *bini*, *bis*, Skr. *dva* (two), *dvīs* (twice), Z. *dva* (two), *bi-* (two, in composition), Gr. *δύο*, *δίς*, *δεύτερος* by metathesis from *dvataras*, L. *duo*, *dis-*; *bi-* occurs several times in composition, as in *bivira* (noticed by Varro in the sense of *widow*), *bipes*, St. *biped* = Skr. *dripad* (a man), *bīnus* = *bi-himus* (according to Aufrecht) from *bi-* and *himo-* = Z. *hima* (a year) connected with Skr. *hima* (snow), L. *hiems*, but = *hi-smus* (according to Bopp) from *bi-* and *smo-* connected with Skr. *samā* (a year); *bellum* = *duellum*; *Bellius* = *Duellius*, *bonus* beside *duonoro* (t. Scip. Barb. f.) = *bonorum*.

*B* = I. E. *m* in *blandus* for *mlandus*, a participial form of a R. *mlā*, the original form of which was probably *marl*, which is found in Skr. *mrd* (exhilarare), Gr. *μείλια* (propitiatory gifts), E. *mil-d*. This is the only example of this change that has been adduced. It is better, however, to suppose that *blandus* came from *mlandus* through the step *mblandus*, as Gr. *βροτός* = *μβροτος* = *μροτος*, than to suppose that *b* immediately represented *m*.

*B* (according to Bopp) represents Skr. *v* in *-ber* (*September*, &c.) beside Skr. *vāra* (time), and in *balneum* beside Skr. *bād* (lavare). This latter comparison is certainly wrong, for *balneum* is borrowed from Gr. *βαλανεϊον*, which was derived from *βάλανος* (an acorn), on account of the similarity of their shapes, and the Skr. *bād* is a very obscure word.

*B* = I. E. *p* (when final) : *āb*, Skr. *apa* (away), Gr. *ἀπό*,

Goth. *af*, O. H. G. *aba*; *ob* (which originally meant the same as *ad*, as in *obviam*, *obire*, *opportunus*), Skr. *api* (used as an adverb = *also*, and as a prefix = *after*, as in *apig'as* = ἐπίγονος), Gr. ἐπί, ἐπεί; *sub*, Skr. and Z. *upa* (to), Gr. ὑπό, Goth. *uf*. (sub), O. H. G. *oba* (super). *B* = Gr. π in some borrowed words, as *Burrus* = Πύρρος, *carbasus* = κάρπασος, *luxus* = πύζος *Buxentum* from Πυξοῦς.

*F* = I. E. *bh* : *fari*, *fatum*, *fax*, *facies*, *favilla*, Skr. *bhā* (to shine), *bhāsh* (to speak), Gr. φημί, φαίνω, φάος; *forare*, Z. *bar* (to bore), Gr. φάρος (a plough), φάραγξ (a ravine), O. H. G. *poran* (to bore), E. *bore*; *fero*, *fordus*, *far*, Skr. *bhar* (to bear), Z. *bar* (to bear), Gr. φέρω, E. *bear*; *flare*, *flcs*, Gr. ἐκφλαίνω (I flow out), φλα-σμός (bubbling, boasting), O. H. G. *blān*, (to blow), *blatara* (pustule). *bluojan* (florere), Goth. *blōma* (bloom), *blōth* (blood); *fui*, Skr. *bhū* (to be), Gr. φύω, E. *be*; *fugio*, I. E. *bhugh*, Skr. *bhug'* (to bend), Gr. φεύγω, Goth. *biuga* (I bend); *fagus*, Gr. φηγός, E. *beech*; *fulgeo*, *fulvus*, Skr. *bhrāg'* (to shine), Gr. φλέγω, E. *bright*; *fremere*, *frētum*, *Frentani*, Skr. *bhram* (to whirl), Gr. βρέμω, βροντή, O. N. *brim* (the surge); *furvus*, and *fuscus*, perhaps for *fur-scus*, as *Tuscus* for *Turscus*, Skr. *babhru* (red, and the ichneumon), Gr. φρόνη (the toad, from its colour), E. *brown*; *fundere*, Skr. *bhid* (to cleave), E. *bite*, &c.\* A medial *f* (= I. E. *bh*) between two vowels is only found in such compounds as *signifer*, &c.; and in *scrofa* (a sow), Gr. γρομφάς (a sow), so called from its *rooting*, connected with γράφω, γροφεῖς (ζωγράφοι, Hesych.), Goth. *graba* (I dig), L. *scrobs*; &c. In Oscan and Umbrian we not only find *f* = initial *f* in Latin, but also *f* = medial L. *b* : O. U. *tefe*, *ife* = L. *tibi*, *ibi*; O. U. *trifor* = L. *tribus*; O. U. *prufe* = L. *probe*, Skr. *prabhāva* (excelsus) (?); O. O. *puf* = L. *ubi*; O. O. *sifei* = L. *sibi*; N. O. *amprufid* = L. *improbe*, &c.

*F* = I. E. *dh* : *of-fendo*, Gr. θείνω; *festus*, *feriae*, Gr. θίσσεσθαι (ικετεύειν, Hesych.), perhaps θεός for θεσ-ος, θέσ-φατος; *famulus*, Skr. *dhā* (to place), Gr. τίθηναι; *femina*, *filius*

Skr. *dhē* (to drink), Gr. *θῆσθαι* (to milk); *fumus* = Skr. *dhū-mas* (smoke), Gr. *θυμός*, &c. A medial *f* (= I. E. *dh*) between two vowels is only found in *rufus*, Gr. *ῥουθρός*. In Oscan and Umbrian medial *f*, as well as initial *f*, = I. E. *dh*, as in O. U. *meſa* for *meſia*, O. O. *meſiaſ* = L. *mediae*, O. U. *verſale* = L. *verbale*, &c. This interchange between *f* and *dh* is easily explained; consult §. 55. We frequently hear children saying *fum* for *thumb*, &c.; also *fyrst* is a dialectic form of *thirst*.

*F* = I. E. *gh*: *formus*, (hot) *fornax*, Skr. *gharma* (warm), Gr. *θερμός*, E. *warm*; *frio*, *frico*, O. U. *frehtu* = L. *frictum*, Skr. *ghar* (to sprinkle), *gharsh* (to rub), Gr. *χρίω*; *fons*, *futis* (vas aquarium), *fundo*, Gr. *χέω* for *χέFω*, from R. *χv*, Goth. *giuta* (I pour); O. L. *foſtis*\* = *hoſtis* = Goth. *gaſts* (a guest), Skr. *ghas* (to eat); O. L. *folus* = *holus*, *olus*, *helvus*, *flavus* (*flava* is applied to Ceres, as *χλοή* is to Demeter), Skr. *hari* (green), Gr. *χλοή*, E. *green*: O. L. *fariolus* = *hariolus*, *haruspex*, Skr. (Ved.) *hirā* (entrails), L. *hira*, *hilla* (entrails), O. N. *garnir* (intestines); O. L. *fædus* = *hædus*, E. *goat*; *fra-gra-re* is said to be a re-duplicated form of an I. E. *ghrá* = Skr. *ghrá* (to smell), &c. In the same way *gh* is pronounced as *f* in E. *laugh*, *cough*, *tough*, &c.

*F* never represents an I. E. *p*, except when *s* originally preceded, as in *fallo* = Gr. *σφάλλω*, *fungus* = Gr. *σφόγγος*, *funda* beside *σφενδόνη*, *fides* (catgut) beside Gr. *σφίδη* (catgut). We hear children frequently saying *funge* for *spunge*, *foon* for *spoon*, &c. Aufrecht connects N. U. *frite* (ritu) with Skr. *prī* (to love), and ascribes *f* to the aspirating influence of the following *r*, as in Gr. *τέφρα* (ashes) beside Skr. *tap* (to burn), A. S. *thefian* (aestuary), G. *dampf* (steam). *Fluo* has nothing to do with Gr. *πλέω* from R. *πλυ*, but is probably connected with Gr. *φλύω*; *pluit* is the true Latin representative

\* As *f* in O. L. *foſtis*, &c., became *h*, so L. *f* becomes *h* in Spanish, as *hijo* = *filius*, &c. Similarly in Irish initial *p* is lost, as in *athir* = L. *pater*, *lán* = *plenus*, &c.; *p* in Irish probably became *ph*, then *h*, and finally disappeared.\*

of R. *πλν*. In Oscan *t* aspirates a preceding *p*, as in N. O. *scriptas* = L. *scriptae* (nom. pl. fem.); in Umbrian this *f* became *h*, as in O. U. *scr̄h̄to* = L. *scriptum*.

Medial *f* between vowels occurs in *scrofa*, *rufus*, compounds of R. *fer*, as *signifer*, *sipilus* beside *sibilus*, *Afer*, *vafer*, and *tofus*, and the derivatives of these words.

*V* = I. E. *v*: *aerum*, Skr. *ēva* (course), Gr. *αἴς*, Goth. *aivs* (*αἰών*); *ventus*, Skr. *vá* (to breathe), Gr. *ἄω*, *ἄηρ*, *αὔρα*, from R. *aF*, Goth. *vinds* (wind); *ver*, Skr. *vasanta* (ver), Gr. *ἔαρ*, Lith. *vasarà* (summer); *virus* = Skr. *vishas* (poison), Gr. *ιός*; *vītex*, *vīmen*, *vitta*, *vītis*, *vinum*, Skr. *viṭikā* (a band), *vētra* (a reed), Gr. *ἴρυς*, E. *withe*; *ovis* = Skr. *avis* (a sheep), Gr. *οῖς*, Lith. *avīs* (a sheep), E. *ewe*; *novus* = Skr. *navas* (new), Gr. *νέος*, Ch. Sl. *novǔ* (new); *venum*, *veneo*, *vendo*, Skr. *vasnas* (nom. sing. masc. prime cost), *vasnam* (nom. sing. neut. hire), Gr. *ῥωρος*, Ch. Sl. *rěniti* (to sell); *verna*, *vestibulum*\* (according to Bopp), Skr. *vas* (to dwell), Gr. *ἄστν*; *Vesta*, Skr. *ush* (to burn) = I. E. *vas*, Gr. *ἑστία*; Bopp, however, connects *Vesta* and *ἑστία* with Skr. *vas* (to dwell), &c.

*V* is vocalised frequently in Latin: *quatuor*, Skr. *kātvāras*, Goth. *fidvōr*; *vacuos* for *vucros*, *contiguos* for *contigros*, *ingenuos* for *ingenros*, &c., where term. *-uo* = *-vo*, as found in *alvos*, *arvom*, &c.; *sūdo* (according to Schleicher) for *suido*, as *senatus* for *senatuis*, Skr. *svid* (to sweat), Gr. *ἰδῖω*.

*V* is retained in Old Latin, Old Umbrian, and Old Oscan, after *o*, *u*, and *i*, where, in later times, it disappeared, as O. L. *sovos* = *suus*, *flouont* = *fluunt*; O. U. *tuves* = N. U. *duir* = L. *duobus*, O. O. *siveis*, *sivad* = O. L. *sovi*, *sovad* = L. *sui*, *sua*, &c. In Old Oscan we find *v* retained before consonants, as in *tū v̄ks* = L. *tūticus* beside N. O. *toutad*, from St. *tuvta* = O. U. *tuta*— (a city).

\* Mommsen explains *vestibulum* as meaning dressing-room, from *vestis* so called from the fact that the Romans only wore the tunic in the house and put on the toga when they were going out.

*M* = I. E. *m*: *morior*, Skr. *mar* (to die), Gr. ἄμβροτος, from R. μορ, μαρῶνω, Goth. *maurthr* (murder); *memor*, Skr. *smar* (to remember), Gr. μέμνηνα, μάρτυρ, μέμμερα ἔργα; *mensis* = I. E. *mansas* = Skr. *māsas* (a month), Z. μάσῃῃα (a month), Gr. μήν, Ion. μέις, μήνη, Æol. μῆννος for μηνσος; *me*, Skr. *mām*, and *ma* (me), Gr. μέ, Goth. *mik* (me); *-m* (sign of acc. sing.) = Skr. *-m*, as *equum* = Skr. *as'vam*; *-m* (in *sum*) = Skr. *-mi* = Gr. *-μι*, as *sum* = Skr. *asmi* = Gr. εἰμί; *mergo*, perhaps for *mesgo* connected by Bopp with Skr. *mag'g'* (mergi), Lith. *mazgójū* (lavo), &c.

*M* represents a Skr. *v*, according to Bopp, in *clamo* = Skr. *s'rāvayāmi*, a causal of *s'ru* (to hear), and *māre* = Skr. *vāri* (water). In both these cases Bopp appears to be wrong, for *clā-mo* is much more easily connected with Gr. καλέω, κλησις, L. *calare*, *nomen-clā-tor*, than with Skr. *s'ru*, and *mare* probably meant originally *a desert*, connected with Skr. *maru*, (a desert), *mar* (to die), Ir. *muir*, E. *moor*, *mere*, Gr. Ἀμφίμαρ-ος (a son of Poseidon). Other examples of this interchange of *v* and *m* have been brought forward, but all of them are even more doubtful than *clamo* and *mare*. Thus Bopp considers Gr. δρέμω = Skr. *dravāmi* from *dru* (to run), though it is much simpler to connect it directly with Skr. *dram* (to go).

*M* represents a Skr. *bh*, according to Bopp, in *maxilla* beside Skr. *bhaksh* (to eat), and *multus* beside Skr. *bhūri* (multus). These comparisons are just as doubtful as those between *v* and *m*. Curtius is inclined to assent to the opinion that *maxilla* is connected with Gr. μάσσω, μαγεύς (a baker), and, consequently, means the organ "quod cibos deponit ac subigit." Bopp had his own misgivings about the connexion of *multus* with *bhūri*, for he also suggests that it may be related to Skr. *puru* (multus). *Multus*, though apparently connected with Gr. μυρίος, has never yet been satisfactorily explained.\* *M* is = *bh* in the Umbrian sing. loc. term.

\* *Multus* may have originally meant "pounded," "ground into many small fragments;" and from this its ordinary meaning may have been de-

-*mem* ; if this be = Skr. -*bhyam* (in *tubhyam*) or -*bhyâm*. Similarly in Lith. dual dat. *wilkam*, -*m* = Skr. -*bhyâm*.

### §. 81. ASSIMILATION.

I. When two consonants come together, the first is often made the *same* as the second. After *long* vowels only one of these double consonants could be heard in pronunciation, and consequently only one was written ; it is therefore impossible to distinguish such cases from those where a consonant has disappeared with or without compensation. Schleicher reduces all the latter cases to those of assimilation, and considers that a consonant, before it vanished, was first assimilated to the following one. After *short* vowels the double consonants are generally written. *Cc* (*cc*) = *de* in *accurro*, *quicquid*, *quicquam*, *iccirco*. *Cc* = *bc* in *succurro*, *occurro*. *Cc* perhaps = *gc* in *saccus* and *soccus*\* beside Skr. *sag* (to cover), and Gr. *σάγη* ; *saccus* is however most likely borrowed. *Cc* = *sc* in *siccus* = Skr. *s'ushkas* (dry). *Gg* = *dg* in *aggero*. *J* = *jj* = *gj* in *mājor* = *mājgjor* beside *magnus* ; *ājo* = *agjo* beside *ad-āg-ium* ; *mējo* for *mījo* = *mitgjjo* beside *mingo*, Gr. R. *μυχ* = Skr. *mih* ; *pulējum* for *pulēgjum*. We find *j* = *dj*, *rj*, *sj*, *nsj* in *sējungo*, *pējero*, *dijudico*, *trājicio* respectively, &c. *Pejor* is connected by Bensley with Skr. *pāpa* (bad), and if this view be correct, it must stand for *pepjor* ; Bopp, however, connects it with Skr. *pīy* (conviciari), Goth. *fijan* (to hate), E. *fiend*. *Tt* = *dt* in *attraho*. *Tt* = *kt* in *littera* for *lictera*, beside Skr. *likh* (to write) ; Schweitzer con-

veloped. There existed, most probably, in Indo-European a root *mar* (to pound) from which were derived L. *mola*, E. *mill*, *meal*, Gr. *μύλος*, *μύλη*, &c. ; for a full discussion of this root, consult Max Müller, Lectures II., p. 315, seq.

\* Spiegel connects *soccus* with Z. *hakha* (the sole of the foot) connected with Skr. *sak'* (to follow, to cling to) ; whence Skr. *sakhi* (a friend) *sak'iva* (a friend) beside L. *sequor*, *socius*.

nects this word with Skr. *lip* (oblinere), and therefore considers it to have arisen from *liptera*; but *pt* remains unchanged in Latin, as in *aptus*, *ruptus*, &c. In *Vitorius* (on an inscription belonging to times of First Punic War, and also on very late inscriptions), and the late forms *autor*, *Adauta* for *auctor*, *Aduucta*, *c* was probably first assimilated to *t*, and then fell out, just as in late Latin we find such forms as *otto*, *præfetto*, and in Italian *benedetto*, *maledetto*. *Autumnus* is also for *Auctumnus*, from *aug-eo*; Corssen appears to be mistaken in connecting it with Gr. ἄω for ἄϜω, which is found only in infin. pres. ἄμεναι (to satiate). *T* = *Tt* = *nt* in N. O. *set* = L. *sunt*. Similarly in Old Irish we find *-t* = *-nt* in the term. s of the 3 pl. of the verb, as *-at*, *-et* = L. *-unt*, *-etar* = L. *-untur*; we also find *etar* = L. *inter*, *cét* = L. *centum*. *Dd* (and then *d*) = *sd* in *jūdex* for *jusdex*, *īdem* for *īsdem*, *dīduco* for *dīsduco*. *Ss* (and then *s*) = *cs* (*x*), as in *Sestius* = *Sertius*; *prætestati* = *prætestati*; *frassinus* = *fraxinus*; *trissūgo* (the herb germander) = *trixago* (Cels. 8. 3); *cossim* (on both the hips), from *coxa*, connected with Skr. *kukshi* (the belly), and Gr. κοχώνη for κοξώνη; O. U. *csuk* for *eksuk*; O. O. *medleis* beside μεδδεις. Similarly we have O. I. *dess*, *des* beside *dexter*, Ch. Sl. *desinŭ* (dexter) Skr. *dakshina* (dexter); O. I. *ass-*, *ess-* = L. *ex*. *Ss* = *ds* in *assuesco*, *assimulo*, *cessi* for *cedsi*, *pēs* for *pēds*, *esse* (to eat) for *edse*. *Ss* = *ts* in *possum* for *potsum*, *concussi* for *concutsi*, *fons* for *fonti*, &c. *Ss* = *ns* in Oscan acc. pl. *viass* = L. *vias* for *vians*, &c.; similarly in *o-* and *i-* stems the Oscan acc. pl. ends in *-iuss* and *-iiss*. We find *s* = *ss* = *ns* in *formōsus* for *formonsus*, the suffix of which is perhaps the same as Skr. *-vant*; also in *cosul*, *cesor*, *quoties*, &c. beside *consul*, *ensor*, *quotiens*, &c. *Ss* = *rs* in *russum*, *sussum*, *retrossum*, beside *rursum*, *sursum*, *retrorsum*, also written *rūsum*, &c.; *prossum* and *prosa* beside *prorsum*; *dossuarius* (bearing a burden), from *dorsum*; *possideo* from *porsideo*. *Ss* = *bs* in *jussi*; = *ms* in *pressi*; = *vs* in *locassim*, *amasso*, &c. *Nn* = *dn* in *annuere*, *annare*, *annectere*. Benfey connects L. *annona* with Skr. *anna*

(food) for *adna*, from R. *ad* (to eat), but it much more probably belongs to L. *annus*. *Nn* = *mn* in *annus* for *amnus*, whence comes *solemnis*, from *am* = *ambi* (round), meaning a 'complete revolution of the sun'; *Vitunnus* beside *Vitumnus*, *Neptūnus* beside *Neptumnus*, *Portūnus* beside *Portumnus*. *Nn* = *mn* in *conniti*. *Nn* = *sn* in *penna* for *pesna*, and this for *petna* from R. *pet* (to fly). *Rr* = *dr* in *arridere*; = *br* in *surripere*; = *nr* in *irrumperere*; = *mr* in *corripere*; &c. *Rr* = *cr* in *serra* from R. *seo* (to cut) and = *tr* in *parricida* for *patricida* (?). *Ll* = *dl* in *alligare*; = *nl* in *illinere*; = *ml* in *collocare*; *rl* in *intelligere*, *pellucere*; &c. *Ll* = *dl* also in *sella* for *sedla*; *lapillus* for *lupillus*; *Aufellius* beside *Aufidus*, &c. *Ll* = *rl* in *gallus* = *garlus*, Skr. *gar* (to call), Gr. γῆρυς, Γηγυών, E. *call*; *olla* = *orula* from a R. *var* (to seethe), which is found in Gr. βράσσω and βράζω (I boil) from R. βρα = *Fpa*, Lith. *virti* (to boil), Ch. Sl. *vrēti* (serve), O. H. G. *wāli* (heat); *puella* = *puerla* for *puerula*; *ampulla* beside *ampora*; *stella* beside ἀστήρ; *Tibullus* from *Tibur*, &c. *Ll* = *nl* in *asellus* beside *asinus*; *corolla* beside *corona*; *homullus* beside St. *homon*—; *Messalla* from *Messana*; *illico* (in Plautus *ilico*) = *in loco*. *Ll* = *cl* in *paullus* for *pauculus* (?). *Pp* = *dp* in *appello*; = *bp* in *oppono*. *Ff* = *bf* in *officium*, *suffoco*; = *df* in *afferre*; *cf* in *efferre*; = *sf* in *diffugere*. When a preceding consonant is assimilated to *v*, it disappears sometimes with and sometimes without compensation. Thus we have no compensation in *lēvis* for *legvis*, Gr. ἐλαχύς; *brēvis* for *bregvis*, Gr. βραχύς; *nivis* for *nigvis*, beside *nix* for *nigs*, *ninguo*: in *vivere* and *connivere*, on the other hand, we find compensation for the *v* thrown out. *Mm* = *pm* in *summus*; = *gm* in *flagma*; = *bm* in *summittere*; = *nm* in *inmittere*, &c.

II. When two consonants come together, the second is often made the same as the first. *Tt* perhaps = *ty* in *mitto* for *mityo*. *Ss* = *st* in superl. term. *-issimus*, as in *longissimus*, *-is-* being the remains of the old compar. term *yans*; *os*, St. *ossi* = *osti*, Skr. *asthi* (a bone), Gr. ὀστέον; *ensor* = *cens-tor* = N. O. *censtur*, *censum* = N. O. *censtum*. When *t* is preceded by *t* or

*d*, the first dental generally becomes *s*, and then the second is assimilated to it, so that *dt* and *tt* become *ss*, or *s* after long vowels and consonants: thus we have *fessus* for *fettus*, beside *fatigo*, *adfatum*; *ēsum* for *edtum*, from *edo* (I eat), beside *est* (he eats) = *edit*; *fossa* = *fodta*, *fodio*; *missus* = *mittus*, *mitto*; *ūsus* and *ussus* (on inscriptions) = *uttus*, *uti*; *clausus* = *claudtus* *claudio*; *fissus* = *fidtus*, *findo*; *versus* = *vert-tus*, *verto*, &c. So in Irish we find *ss* for *st* in borrowed words, as *fess* = L. *festum*; also in words not borrowed the same law holds as in Latin; thus we find *fiss* (*scientia*) for *fidtis*, from R. *fid* = I. E. *vid* (to know), &c. In Oscan *tt* is kept, and does not become *ss* as in Latin: we find O. O. *uittiuf* beside L. *ūsus* from *uti*. *Nn* = *nd*: *dispennite hominem divorsum et distennite* (Miles Gloriosus, 1407), for *dispendite*, *distendite*; *grunnio* for *grundio*, E. *grunt*; O. O. *ipsannam* = L. *operandam*; N. U. *pihanēr* = I. *piandi* (gen. sing.); N. U. *panupei* = I. *quandoque*; but when *nd* in Umbrian represents an older *nt*, it does not become *nn*. *Rr* = *ry* in *curro*, Skr. *Kar* (to go), O. II. G. *horse* (quick), E. *horse*. *Rr* = *rs*: *torreo* for *torseo* beside *tostus* for *torstus*, Skr. *tarsh* (to thirst), Gr. *τέρσσαι*; *terra* (dry land) for *tersa* from same root as last; *ferrem* for *fersem*; *porro* for *porso*, Gr. *πρόσω*; *far* for *fars*— and this perhaps for *fart*—, compare Skr. *bhṛti* (nourishment) from *bhar* (to bear), N. U. *fursio* = L. *farreum*; *terreo* = *terseo*, Skr. *tras* (to tremble), Gr. *τρέω* from R. *τρέε*, \* *ἔτερσεν* (ἐφύβησεν, Hesych.), Hom *τρέσσα* (1. aor.); *erro* = *erso*, Goth. *airzjan* (to wander); *verres* (a boar) = *verses* beside Skr. *varsh* (to sprinkle), *vrsha* (a bull); *garrio*\* = *garsio* beside Lith. *gàrsas* (the voice); *horreo* = *horseo*, Skr. *hṛsh* (horrere). *Rr* = *rt* in *pulcerrimus*, *celerrimus*; here *rt* probably passed through the stage *rs*. *Il* perhaps = *lk* in *folis* (a bag) be-

\* Leo Meyer suggests that *garrio* is for *garnio*, from which latter he explains *gannio* (I yelp). Bopp considers *garrio* to be for *gargio*, beside Skr. *garg'* (clamare), but this is most improbable.

side Gr. *θύλακος* (a bag), *θυλλίς* (a bag), Goth. *balgs*. *Ll* = *ly* in *pello*, *fallo*, *percello*, *tollo*; *cella* for *celia* beside L. *celo*, *domicilium*, Skr. *khala* (a threshing-floor), *s'âlî* (a house) Gr. *καλιά* (a hut), unless *cel'ia* be for *celula*; *procella* for *procelia*, beside Skr. *kul* (to impell), Gr. *κέλης*, *βουκόλος* (a cow-herd), L. *cello*, *celox*, *celer*; O. II. G. *allo* (nom. sing. fem.) = L. *alia*, Gr. *ἄλλος*, O. II. G. *alles* (otherwise). *Ll* = *lt* in super term. *-iltimus* = *-iltimus*, as *facillimus*, &c.; *fel*, *fell-is* (gen. sing.) = *feltis* (?); *mel*, *mell-is* (gen. sing.) for *melt-is* = Gr. *μέλιτ-ος*, *μελίσσα* = *μελιτσα*, Goth. *milith* (honey). Bopp wrongly considers *mellis* to be for *melvis*, connecting it with Skr. *madhu* (honey). *Lt* in becoming *ll* probably passed through the stage *ls*, as *pulsus* is for *pultus*. *Ll* = *ld* in *Pollux* = Gr. *Πολυδεύκης*, and, according to Bopp, in *mollus* for *maldeus*, beside Skr. *mard* (to pound). *Ll* = *ls* in *vellem* = *velsem*, *velle* = *velse*; *collum* = *colsum*, G. *hals* (the neck). *Ll* = *lu* in *vellus* beside Skr. *ûrma* (wool), Lith. *vîlma* (wool), Ch. Sl. *vlîna* (wool), Goth. *vulla* (wool); *collis* (according to Curtius) = *coluis* beside Gr. *κολωνός*, Lith. *kálnas* (height), A. S. *holm* (a hill). *Ll* = *lv* in *pallor*, *pallidus* beside O. II. G. *falo*, *fatwer*, G. *fulb*, Lith. *pálvas*, (pale), Ch. Sl. *plavâ* (white);\* *pellis* = *pelvis*, beside *pulvinar*, G. *fell* (a hide), Gr. *πέλλα* (a hide), *vallis* perhaps for *valvis*, Gr. *ἐλος*, *Ἐλέα*, *Ἥλις*; *sollus* (*solli-ferreus*, *solli-citus*, *soll-ers*) = Skr. *sarvas*, (omnis), Gr. *ὅλος*, Ion. *ὄλος* = *ὀλφος*; *mollis* = *molvis*, beside Gr. *μῶλνς* (slug-gish). *Pp* = *pt* in *quippe*, *ipsippe* (*ipsi neque alii*, Fest. p. 105), beside *nepte*, *mihipte* (Cato pro 'mihi ipsi', Fest. p. 152, 154.), *vopte* (*vos ipsi*, Fest. p. 379): *-pte* = *-pote*, (compare *ut-pote*), *-potis*.

III. When two consonants come together, the first is generally made *like* the second, or affected by it in some way,

\* Gr. *πελλός* (dusky) is for *πελγος*, compare *πολιός* (grey), *πελιδνός*, *πελιός*, *πελός*, Skr. *palita* (grey). Now, if *ll* (in *pallor*) = *lv*, we have a trace of a more intimate connexion between Latin, Lith. O. II. G. &c., than between Lat. and Gr.

the second consonant still remaining unchanged. Thus, sonant consonants become surd before surd consonants: *actus* = *agtus*, R. *ag*; *scriptus* = *scribtus*, R. *scrib*, connected perhaps with Gr. γράφω; *ructo* = *rugto*, beside L. *erugo*, Gr. ἐρεύγω; *fictor*, *fictilis* beside L. *fingo*, *figura*, Skr. *dih* (to smear), Gr. ἔθιγον; *luctus* beside L. *lugeo*, Skr. *rug'* (vexare), Gr. λυγρός; *mulctus* beside L. *mulgeo*, Skr. *marg'* (mulcere), Gr. ἀμέλω; *vectus* beside *veho*, Skr. *vah* (vehere), Gr. ὄχος; *lectus*, *lectica* beside Gr. λέχος, Goth. *liga* (I lie down); &c. There are some apparent exceptions to this rule: thus, we find *absens*, *subter*, *obtego*, *obtineo*,\* &c., where *b* is still retained; but these words were pronounced as *apsens*, &c., for Quintilian (I. 7, 7) writes "cum dico obtinuit secundam *b* litteram ratio poscit, aures magis audiunt *p*," and consequently we find them frequently written according to the pronunciation, as *apsens*, *optineo*, &c., on inscriptions and in manuscripts. Before *r* and *l* surds frequently become sonants, as *publicus* = O. L. *poplicos*; *negligo* from *nec* and *lego*; *quadrupes* and *quadragenta* beside *quatrividuo*, from *quatuor*; O. U. *abruf* = L. *apros*. We also find surds becoming sonants before other sonants, as in *segmentum* from *seco*; *salignus* from St. *salic*; *dignus* from R. *dic*; *ilignus* from St. *ilec*; *cygnus* = Gr. κύκνος. M before gutturals becomes guttural *n*, and before dentals, dental *n*, as in *anceps* = *ambiceps*; *concors* = *comcors*; *nunquam* = *numquam*; *contero* = *comtero*; *tandem* = *tandem*; &c. Initial gutturals and dentals influence a preceding *m*, as in *con quo* = *com quo* (on late inscriptions); *an terminum* = *am t.* = *ambit.*; &c. N before labials becomes *m*, as in *impleo*, &c. Labial mutes before *n* become *m*, as *somnus* = *sopnus*, beside L. *sopio*, Skr. *svapnas* = Gr. ὕπνος; *Samnium* = *Sabnium*, beside *Sabini*; *scamnum* beside *scabellum*. In Old Latin *t* before *n* became *s*,

\* The junction of two mutes is sometimes avoided by inserting *s*, as in *abstineo*, *abscondo*, *ostendo* for *obstendo*, *asporto* for *adsparto*.

as in *pesna* (*penna*) = *petna*, *resmus* (*rēmus*) beside Gr. ἰερ-  
μός. In these cases *t* became *th* through the aspirating in-  
fluence of the nasal, and then *th* became *s*. This aspirating  
influence of a nasal upon a preceding surd mute is very  
common in Greek. O. L. *cesna* (*cena*) is perhaps = *cedna*  
beside Skr. *khul* (to eat), *khādāna* (food). *Tr* appears also  
in some cases to have become *br*, through the steps *tr*, *thr*,  
*dhr*, *br*, the dental being aspirated by the following *r*: *conso-*  
*brinus*, from *con* and *sostor* = I. E. *svastār* (sister), passed  
through the stages *consostorinus*, *consostrinus*, *consosthrinus*,  
*consosdhrinus*, and then *dh* became *b*, as in *ruber*, &c.: *salu-*  
*bris* passed through stages *saluttris* (from St. *salut*), *salustris*,  
*salusthris*, *salusdhris*, *salūdhris*, compare *palustris* from St.  
*palud*; *muliēbris* = *muliēstris*, through a similar series of steps;  
*tenebrae*\* = *tenesthræ* = *tenestrae*, perhaps from an I. E. *ta-*  
*mastra*, whence Skr. *tamisra*, beside Skr. *tamas* (darkness),  
Z. *temaih* (darkness), Lith. *tamsà* (darkness), O. H. G. *demar*  
(crepusculum), O. S. *thim* (dim), Ir. *teim* and *temel* (dark), W.  
*tywyll* (dark).

*T* exercised an aspirating influence upon the preceding  
tenuis in Umbrian and Oscan: thus in Umbrian *et* and *pt* be-  
came *ht*, as O. U. *scrēhto* = L. *scriptum*, O. U. *rehte* = L. *recte*,  
O. U. *subahtu* for *subactu* = L. *subigito*: in Oscan *pt* became  
*ft* and *et*, *ht*, as N. O. *scriftus* = L. *scriptae*, N. O. *Ohtavis* =  
L. *Octavius*, O. O. *ehtrad* = L. *extra*, O. O. *suahtum* = L. *sanc-*  
*tum*. This aspirating force of *t* upon a preceding tenuis ma-  
nifested itself also in late Latin, as in *juchtivus*. Such Italian  
forms, as *oggetto*, *otto*, *perfetto*, *ottare*, *ottuso*, &c., from L. *ob-*  
*jectus*, *octo*, *perfectus*, *optare*, *obtusus*, &c., most probably  
passed through the intermediate forms *objechtus*, *ochto*, *per-*

\* Consult Ebel, K. Z. XVI. 77, seq.; Ascoli, K. Z. XVI. 196, seq.;  
Bopp, Skr. Gl. under *tamas*, who considers that *tenebrae* is for *tembræ*, *b*  
being inserted for euphony (as in ἀμύσσοια) in *temræ* beside Skr. *timira*  
(obscuritas) and *tamisra*.

*fechtus, oftare, oftusus*, &c. In Irish\* *c* and *p* before *t* become *ch*, as *ocht* = L. *octo*, *recht* (lex) for *rect*, *lacht* (milk) for *lact*, *secht* = L. *septem*, *necht* = L. *neptis*, &c. In Welsh this *ch* has disappeared, and we find W. *wyth* (eight) = Ir. *ochto*, W. *noith* = Ir. *nocht* (night), W. *reith* = Ir. *recht* (lex), W. *taith* = Ir. *techt* (iter), &c., the palatal vowel (*i*) making its appearance on account of the palatalization of the original guttural. A change similar to this last is found in E. *night*, *might*, *eight* beside G. *nacht*, *macht*, *acht*; and in the Romance languages as Port. *oito*, Prov. *oit*, Fr. *huit* from L. *octo*; Port. *noite*, Prov. *noit*, Fr. *nuit* from L. *noctem*; Port. *feito*, Fr. *fait* from L. *factom*.

In Gothic we find a mute before a dental changed into the corresponding spirant, after which the dental always is or becomes *t*: *sauhts* (sickness) for *sukthis* beside *siuks* (sick); *mahts* (might) for *magthis* from R. *mag*; *ga-skafts* (creation) beside *ga-skap-jan*; *fra-gifts* (lending) beside *gibgn* (to give). *H* in these Gothic forms, *sauhts*, *nahts* (night) = Lith. *naktis*, *raihts* = L. *rectus*, &c., was very guttural; and the corresponding *gh* in English once had a strong guttural sound, as it still has in lowland Scotch, as in *eneugh* (enough), *sheugh* (a ditch), which are pronounced as *enŭch*, *shŭch* would be in English, or in the notation of the general alphabet as *tnŭχ²*, *s³ŭχ²*. The guttural spirant prefers as neighbouring vowels, *o* and *u*, and hence in Portuguese we find *auto* from L. *actom*, *Outubro* (October), *doutor* (doctor), &c.: compare the English pronunciation of *enough*, *laugh*, *thought*. We can account for the remarkable substitution of *pt* in Wallachian for L. *et* from this

\* Aspiration is of common occurrence in the Keltic languages. In Welsh *r* and *l* aspirate a succeeding consonant as in *march* (a horse) = Ir. *marc*. In Irish *c*, *t* and *p* are aspirated between two vowels, as *ech* (a horse) for *ecu*, and this for *ecus* = L. *equos*, O. S. *ehu*, &c. Similarly initial *p* disappeared, as in *athir* = L. *pater*, *iasc* = *piscis*, *lán* = L. *plenus*, &c.; *p* here passed through the stages *ph*, *f*, *h*, and then vanished as in L. *faedus* = *haedus* = *aedus*, &c.

aspirating force of *t*. *Ct* passed through the stages *cht*, *ght*, *ft* in becoming *pt*, and in a few cases remained at the *ft* stage. Thus we have *doftor* = L. *doctor*, *leftice* = L. *lectica*, where *ct* becomes *ft* and *copt* = L. *coctus*, *fript* = L. *frictus*, *pept* = L. *pectus*, &c., where *ct* advances to *pt*.

In Modern Greek we also see the aspirating force of *t* in ὀχτώ (eight), κλέφτης from κλέπτης, χτένι from κτένιον.

IV. When two consonants come together, the second is sometimes made like the first, or affected by it in some way. Thus *t* often become *s* after *r*, *l*, *c* and the nasals: *noxa* for *nocta* from *noceo*; *pius* for *pigtus* from *figo*; *maximus* for *magtimus*; beside *actus* from *ago*; *pictus* from *pingo*; &c.; *sparsus* for *sparigtus* from *spario* beside *tortus* for *torctus* and *sartus*; *pulsus* for *pultus* from *pello*; *perculus* for *percultus* from *percello*; *excelsus* for *exceltus* from *excellō*; &c., beside *sepultus* from *sepelio*; *mansum* for *mantum* from *maneo*; *tensus* and *tentus* from *tendo*; &c. When the group *nt* belongs to the same element of a word it is unchanged as in *ferunt*, *aman-tem*, &c. *T* after *p* is unchanged except in *lapsus* for *laptus* from R. *lab*. In Sanskrit we also frequently find *ksh* (= *ks*) representing an older *kt*, as *takshá* (carpenter = Gr. τέκτων, *nakshatra* (a star) from *nakta* (night); consult §. 38.

V. Mutual influence of two consonants upon and approximation to each other, both consonants being changed. Thus *suggillatio* comes from *sub* and *cilium*: it is a translation of ὑπώπιον (a blow under the eyes), whence was derived ὑπωπιάζειν (to beat black and blue, to mortify), *Appulus* for *Akvulus* (as ἵππος from ἰκφος) from *aqua* connected with Skr. *ápas* (nom. pl. water), Goth. *ahva*, A. S. *ece*. This root is found in Μεσσοᾶπι-οι (the people between to two seas, compare such formations as Μεσσοποταμία, Μεθύδριον, *Interamna*), γῆ Ἀπία (the Peloponnesus, now called *Morea* from Sl. *more* = L. *mare*), ἐξ ἀπίης γαίης (from the land across the sea). and perhaps the Volscian town *Apiola*

## §. 82. DISSIMILATION.

A dental before a following *t* becomes *s*: thus we have *equester* for *equet-ter* from St. *equet*; *pedester* for *pedetter* from St. *pedet*; *claustrum* from R. *claud*; *est* (he eats) beside *edit* (in Plautus and Lucilius), &c. We find a similar change in Zeud, Greek, Irish, Slavic, Lithuanian and Gothic, but not in Sanskrit. Thus in Skr. we have *atti* (he eats) from R. *ad*, &c., while in Zeud\* we find *ba'sta* (part. praet. pass.) from *band* (to bind), &c.: for Greek examples consult §. 59: in Irish we have *rofestar* (he knows) for *rofedtar* from R. *vid*, *estar* (he eats) from R. *ed*: in Slavic we have *daste* (2 pl. pres.) for *dadte* = I. E. *dadatasi* from R. *da* (to give), *dasti* (he gives) for *dadti* = I. E. *dadati*, &c.: in Lithuanian we have *sė's-czas* (sitting) for *sed-tjas* beside *sėdė'ti* (to sit), *mėsti* (to throw) beside *meti* (I throw), &c.: in Gothic we have *vaist* (thou knewest) for *vaitt* beside *vait* (he knew), &c.

The termination *-alis* is used for *-aris* when the stem to which it is added does not contain *l* in the syllable preceding this termination; thus we have *mortalis* beside *popularis*, &c. Similarly we find *caeruleus* for *cachuleus* from *coelum* and *Parilia* from *Pales*. When two consonants, the same or similar, follow each other, only separated by a vowel, this vowel is thrown out, and only one of the consonants retained: thus we have *veneficus* for *venenificus*; *semestris* for *semimestris*; *semodius* for *semimodius*; *stipendium* for *stipipendium*; *nutrix* for *nutritrix* from *nutrire*; *consuetudo* for *consuetitudo*; *aestas* for *aestitas* from *aestus*; *antestari* for *antetestari*, &c.† Similarly in Greek we have *τράπεζα* for *τετραπεζα*; *τέτραχμον* for *τετραδραχμον*; *ἀμφορεύς* for *ἀμφιφορεύς*; *κελαινεφής* for *κελαινονεφής*; &c.

\* Consult Schleicher, *Compendium*, &c., pp. 203, 235, 289, 308, 321, 385.

† Consult Leo Meyer, *Comp. Gram.* I. 281.

The following words may also be cases of dissimilation : *dulcis* for *gulcis* beside Gr. γλυκύς, the gutt. *g* becoming *d* on account of the next syllable beginning with gutt. *c* ; *in̄te-  
nebrae* beside Skr. *tamisra* and *mihi* beside *tibi* = Skr. *tub-  
hyam*, *m* may have been changed into *n* in the first case and *bh* into *h* in the second, to prevent two labials immediately following each other ; in a few words *v*, when followed or preceded by *o* or *u*, became *b*\* as in *ferbui* for *fervui* and *bu-  
bile* for *bovile* ; *proximus* for *propsimus* beside *prope* ; *tamen* is for *tanem*, and it bears the same relation to *tam* that *ite-  
r* does to *itu*.

### §. 83. CHANGE OF *S* INTO *R*.

*S*, when it comes between two vowels, or between a vowel and a sonant consonant, or when final after a vowel, generally becomes *r*. Thus we have *gero* for *geso* beside *ges-si* ; *uro* beside *us-si* ; *eram* from R. *es* (to be) ; *queri* beside *questus*, R. *ques* = Skr. *s'ras* (to sigh) ; *auris* for *ausis* beside *aus-culto*, Gr. οὖς Hom. οὔατα (pl.) ; *haurio* beside *haus-tus* ; *dirino* and *diribeo* for *disimo* and *dishibeo* ; ~~heri~~ beside *hes-ternus* ; *sero*, for *seso*, a reduplication of R. *sa* (to sow) ; *nurus*, Skr. *snushā* (a daughter-in-law) ; *virus*, Skr. *visha* (poison) ; *soror*, Skr. *svasār* ; *haere* beside *haesito* ; *aurora*, Skr. *ushas* (the dawn) ; *maero* beside *maestus* ; *generis* = Gr. γένεος = Græco-It. *genesos* ; *oris*, *maris*, *muris*, *Liguris*, &c., from *os*, *mas*, *mus*, *Ligus*, &c., beside *masculus*, *musculus* (a little mouse), *Ligusticus*, &c. ; -*rum* (term. of gen. pl.) for -*sum* as (*is-*) *tarum* = Skr. *tāsān* ; *veternus* for *vetesnus* from *vetus* ; *diurnus*, *hodiernus* beside *Diespiter* ; *jurgo* beside *jus*, *justus* ; *carmen* beside *Casmenae*, connected with Skr. *s'ans* to praise) ; &c. Final *s* becomes *r*

\* Curtius compares to this change the substitution of β in Greek for a Græco-It. *v*, as in βούλωμαι beside L. *volo*, &c. Consult his *Grundzüge der Gr. Etym.*, p. 516.

in those cases where a vowel originally followed it, and perhaps in some other cases from the influence of analogy : *amor* (I am loved) is for *amose*, &c. ; *amatur* (he is loved) is for *amatise*, &c. ; \* *majōr* is for *majōs*, *r* probably arising from the influence of the oblique cases, beside *majus*, &c. ; similarly we have *honor* for *honos*, &c. *s* is often retained, as in *vesica*, *casa*, *vasa* (pl. of *vas*), *pusillus*, *cāsus* = *cassus* for *cadtus*, and whenever *s* represents *ss*, *quaeso* beside *quaero*, *nasus* beside *nares*, *miser* beside *maereo*, *posui*, *nisi*, and compounds with *de* as *desino*, &c. In Old Latin we find such forms as *Lases* for *Lares*, *fasena* = *harena*, *Fusius*, *esit* = *erit*, &c. L. Papirius Crassus (Consul B. C. 366) changed his name from *Papisius* to *Papirius* ; from this we see that the substitution of *r* for *s* had already shown itself early in the fourth century B. C. In Umbrian and Oscan *s* is often retained between two vowels : O. U. *asa* = O. L. *asa* (*ara*), O. O. *aasas*, *aasai* = O. L. *asas*, *asai* (*aras*, *arae*). We find, however, O. U. *eru*, N. U. *erom* as the infin. of R. *es* (to be). In Oscan the term. of gen. pl. becomes *-azum* and in Umbrian *-aru* = L. *-arum* I. E. *-āsām*.

#### § 84. THE REJECTION OF A CONSONANT.

The rejection of one of two medial consonants belongs perhaps properly to the province of assimilation, as has been already pointed out in § 81. The vanishing of a consonant between two vowels is also treated by Schleicher as a kind of assimilation ; when a surd in this position vanishes, it must

\* This is the ordinary account given of the origin of the Latin passive, but there are several objections to it which render it somewhat doubtful. In the first place, the form of the second pers. pl. (*amamini*, &c.) is evidently a participle in *-menus* = Gr. *-μένος* = Skr. *-mānas*, and if in the 1st and 3rd pers. pl. final *r* represents the reflexive pronouns, how can we account for the 2nd pers. being formed so differently from them ? In the second place, the passive in Irish ended in *r*, which never represented an older *s* ; e. g. Ir. *bertar* = L. *feruntur*, Ir. *berthar* = L. *fertur*, &c.

have first become a sonant. The disappearance of initial consonants is quite a distinct phenomenon, and cannot be ascribed to the influence of assimilation.

Initial *c* has very rarely vanished; it may have done so in the following examples:—*ubi*, *unde*, *uter*, *ut* beside *ali-cubi*, *ali-cunde*, from I. E. St. *kra* (who), whence Skr. *kas* (who) = L. *quis* = Goth. *hvos*, Skr. *kataras* = Gr. *πότερος* (Ion. *κότερος*) = L. *uter*, E. *whether*; *ut* = *quod*: Weber however connects *ubi*, *uti*, &c., with a pronominal stem that is found in Skr. *u* (*utrum*), *uta* (*vel*, *aut*), but the preceding view is far more probable. Curtius connects Gr. *νέω*, I. *nuo*, *co-niveo* (*coniri*), *nico*, *nictus*, *nictor* with Goth. *hneira* (I bend), O. H. G. *hniga* (I bend), and accordingly assumes that the original root was *knu* from which by gunation we form *knav*, whence we have Goth. *hniv*; the form *co-niveo* points back also to an initial guttural, for, if the root began with *n*, we would have found *con-niveo*: he supposes also that we find the lost *κ* in *κνώσσω* (I nod, slumber) = *κνωκγω* from *κνωκ* (as *πτώσσω* from *πτωκ*) = *κνοακ* = *κνοF-ακ*. *Ludus*, O. L. *loidos*, may be connected with Skr. *kríd* (to play). *Libum* may be for *klibum* beside Gr. *κριβάνη*, Goth. *hlaifs*, E. *loaf*, &c. Jurmann derives *lustrum* (for *clustrum* = *cludtrum*) from *klud*, a secondary form of R. *klu* whence O. L. *cluere*, ('cluere antiqui purgare dicebant.' Plin. xxv. 29, 36), *cloaca*, Gr. *κλύζω* (I wash), Goth. *hlutrs* (pure), O. H. G. *hlutar*. Corssen derives *luscinia* from *cluos* or *clovos* (= Skr. *s'ravas* and Gr. *κλεος*) and *cano*, explaining the name accordingly as "the sweet songstress;" others derive it from *luscus*,\* and explain it as meaning "the twilight songstress." *K* was similarly lost in Gr. *λάξ* for *κλαξ* beside L. *calx*, E. *heel*. *Vapor* and *vappa* are for *evapor* and *evappa* beside *καπύω* (I breathe out), *κάπος* (*ψυχή*, *πνεῦμα*, Hesych.), *καπνός*, &c., Lith. *kvápas* (breath): Crain connects

\* *Luscus* properly means "blind of an eye," hence "*dim sighted*," and *luscum* never means "*twilight*," consequently the proper translation of the word would be "the dim sighted songstress."

*opinor* with this root, but Corssen prefers to connect it with Gr. ὀπσομαι for ὀκνομαι. *Vermis* is for *kvermis* = Skr. *krmis* (a worm) according to Corssen, but Curtius considers that Skr. *krmis* (nom. sing.) Lith. *kirmis* (a worm), Ch. Sl. *crvŭ* (a worm) are quite unconnected with *vermis*, Gr. ἔλμινς, Goth. *vaurms*, which belong to I. E. root *var* (to roll), whence Gr. ἐλύω, ἱλλω, L. *volvo*, &c.

Medial *c* is lost before a vowel in *sirpea*, *sirpicus* beside *scirpus*, *scirpeus*, O. H. G. *scilaf* (sedge); *sipo*, *dis-sipo* beside Skr. *kship* (to throw) for *skip*, G. *schupfen* (to push); *sarmen-tum*, *sarpio* for *scarmentum*, *scarpio* beside O. H. G. *scarf*, G. *scharf* (sharp), from a root *scar* + *p*, *scar* being found in Gr. κείρω, ξυρόν, E. *sheers*, *plough-share*, &c. Medial *c* is lost before *t* in *Sestius* beside *Sextius*, *mistus* beside *mixtus*; *sescenti* for *sexcenti*; *mulsus* for *mulctus* from *mulceo*; *fartus* for *farc-tus*; *sartus* for *sarctus*; *Quintius* = *Quinctius*; *ultor* for *ulctor* beside *ulcisci*; *tortus* for *torctus* from *torqueo*; *vito* for *vic(i)to* beside Skr. *vik'* (to separate), Gr. εἶκω from R. *Ἔικ*; *in-vitus*\* for *in-vic(i)tus* beside Skr. *vas'* (to desire), Gr. ἐκών from R. *Ἔεκ*; *in-vito* for *in-vic(i)to* beside Skr. *vak'* (to speak), Gr. ἔπος, L. *voco*. *C* is lost before *d* in *quindecim* for *quincdecim*; *sedecim* for *sexdecim*. *C* is lost before *s* in *torsi* for *torcsi*; *sarsi* for *sarcsi*; *disco* for *dicsco* beside *didici*; *ursus* for *urcsus*, Skr. *rksha* (a bear), Gr. ἄρκτος; *parsimonia* for *parcsimonia*; *musca* for *mucscat*† beside Skr. *makshikā* (a fly), Z. *makshi*, Gr. *μῦια* for *μυσια*, O. H. G. *mucca* (culex), A. S. *micge*. *C* is lost before *n* in *quernus* for *quercnus*; *vānus* for *vācnus* beside *vā-*

\* Benfey connects *invitus* and *invito* with Skr. *ví* (to desire), and Corssen (*Kritische Nachträge zur Lateinischen Formenlehre*, p. 52, seq.) supports the same view. Corssen connects *vito* with Skr. *ví* (to throw), whence a participial stem *vita-* may be formed meaning "removed, placed at a distance," beside which he also places O. H. G. *wit* (far off), G. *weit*, the *t* of suffix, Skr *ta-*, L. *to-*, being unchanged in German, an exception to Grimm's law.

† Perhaps *musca* has merely arisen from *mucsa* by transposition.

*cuius* ; *dēni* for *dēcni* ; *pīnus* for *pīcnus* beside *pīc-is* ; *quini* for *quincni* ; *lūna* for *lūcna* from R. *luc* = Skr. *ruk'* (to shine) ; *sēni* for *sexni* ; *ex* becomes *e-* in *enarro*, *enato* ; *pānis* for *pācnis*, according to Bopp, beside Skr. *pak'* (to bake), but according to Curtius connected with Skr. *pā* (sustentare), L. *pa-bulum*, *pa-scor*, *pas-tor*, *Pā-les*, *pe-nus* (omne quo vescimur, Cic.), *pe-nates*, *penes*, Lith. *pėnas* (fodder), *pėnù* (pasco), &c. *C* is lost before *l* in *āla* for *ac-la* beside *avilla*, Gr. ἀκχός (the shoulder), O. H. G. *ahsala* (the shoulder) ; *tela* for *texla* beside *tero* ; *culina* for *cuclina* beside *coquo*, *coquina*. *C* is lost before *v* in *sevir* for *seavir* ; *conireo* for *coniereo* beside *conixi*, *nico*, *nictus* ; *obliscor* perhaps for *oblietiscor* beside *linquo*, but Corssen prefers to connect it with the same root as *livor*, *lividus*, comparing Horace's expression *lividas obliviones*. *C* is lost before *m* in *tormentum* for *toremmentum* from *torqueo* ; *semestris* for *sermestris* ; *lūmen* for *lūcmen* from R. *luc* ; *pomum* for *pocmum* (lit. "what is ripe") beside Skr. *pak'* (coquere), but, according to Curtius, for *pormum* (lit. "what has grown") from an I. E. root *pu* (to grow), whence Skr. *pu-māns* (a man), *pu-tra* (a son), Gr. *ποία* for *ποFια*, *πῶλος* for *ποFλος*, *παῖς* and *παῖς* for *παF-ιδς*, L. *pa-pav-er*, *præ-pu-tium* ; *ōmen* for *ocmen* beside Gr. ὄσσομαι for ὀκγομαι, Goth. *ahman* (spirit), *amnis* for *acmenis* from I. E. R. *ak* or *akv* (to be quick) whence *aqua*, &c., but Bopp connects it directly with Vedic *apnas* (aqua) ; *temo* for *texmo*, beside Skr. *taksh* (to form, to cut), Gr. *τίκ-τω*, *τέχ-νη*, *τεύχ-ω*, O. H. G. *dehsa* (an axe).

Initial *g* was lost before *n* in *nosco*, *notus*, *nomen*, *narro* beside *co-gnosco*, *co-gnomen*, O. L. *gnarigo* (narro), *gnarus* from I. E. *gna* (to know), whence Skr. *g'nā*, Gr. ἔ-γνων, O. H. G. *knāu* (I know), &c. ; *norma* (= Gr. γνώμων in meaning), is for *gnorima* from last root, according to Benfey ; *natus* beside *cognatus*, *nitor*, *nixus* beside *gnitor*, *gnixus*, O. H. G. *hnegenti* (nitens), *ana-hnegenti* (innitentes), Goth. *ana-hnain-jan* (to place upon something). *G* was lost before *l* in *lucens* from Gr. γλυκοῦς ; *lact-* beside Gr. γάλακτ- ; and according to

Bopp, in *lassus* for *glassus* beside Skr. *glāsnu* (weary). *G* is lost before *v* in *venio*, *vādum*, *vādo* from I. E. *gva* (to go), when Skr. *gā* (to go), Gr. βαίνω, ἔβην from R. βα, Goth. *qui-man* (to come); *voro* from I. E. *gvar*, whence Skr. *gar* (to devour), Gr. βορά; *vivus*, *vita*, *victus* beside Skr. *g'iv* (to live), Gr. βίος, Goth. *qvius* (living), E. *quick*; *volo* beside Skr. *gal* (to fall), Gr. βάλλω (as Skr. *pat* means both *to fly* and *to fall*); *venter* perhaps for *gventer*, from R. *gen* = I. E. *gvan*, but connected by Curtius and Benfey with Skr. *g'athara* (venter), Gr. γαστήρ, Goth. *quithus* (the belly), *laus-quithr-s* (inanem ventrem habens); *vescor*, according to Bopp, for *gvescor* beside Skr. *ghas* (to eat), to which he also joins Gr. γαστήρ; Bopp connects *vasto* with Skr. *g'as* (laedere), Goth. *fra-qvistja* (deleo), considering the original form to have been *gvasto*; he also connects *vigilo* for *gvigilo* with the Skr. *g'āgar* (vigilare), O. H. G. *wachar* (vigil). These comparisons of Bopp are, however, extremely doubtful: as to *vigil*, Curtius is probably correct in connecting it with L. *vigeo*, *vegeo*.

Medial *g* is lost before *a* following *j*, after having been assimilated to it, and then the preceding vowel, if short, is lengthened in compensation: thus we have *mējo* for *mīgjo*, *mājor* for *māgior*, &c. *G* is lost before *t* in *indultus* for *indulgtus*, *spar-sus* = *spartus* for *spargtus*, *mulsus* for *mulgtus*, *tersus* for *tergtus*, &c. *G* is lost before *s* in *fulsi*, *ursi*, *versi*, *indulsi*, *tersi*, &c., from *fulgeo*, &c.; *compesco* for *compegesco*, from R. *pag* (or *pak*) beside *pignus*, *pango*, *pac-iscor*, *pax*, Skr. *pag'-ra* (firm), Gr. πήγνυμι, &c. *G* is lost before *l* in *stilus* for *stiglius* beside Gr. στίζω, L. *distinguo*; *pālus* for *paglus* from the root *pag*, and perhaps in *filum* (a string) for *figlum* beside *figo*. *G* is lost before *v* in *vivus* for *gvigvus*; *brēvis* for *bregvis*, Gr. βραχύς; *lēvis* for *legvis*, Gr. ἐλαχύς; *nivis* for *nigvis* beside *ninguo*, *nix*; *malo* for *mavolo* from *magevolo*; *malva* beside Gr. μάλαχη; *uveo*, *uvidus* for *ugveo*, *ugvidus* from I. E. *ug* whence Skr. *uksh* (conspergere, humectare) = *ug* + *s*, Gr. ὑγρός, &c.;

*fruor* for *frugvor* beside *frugi*\* (useful), *fruges*, Skr. *bhug'* (edere, frui), Goth. *brukjan*, O. H. G. *prüchan*, *brüchan*, G. *brauchen* (to use), E. *brook*; *torvus* for *torgvus* beside Skr. *targ'* (to threaten), Gr. *ταργαίνω* (*ταράσσω*), *τάρβος*, perhaps *τραχύς*, A. S. *threagan* (to chide), O. H. G. *drawa* for *drahwa*, G. *drohen* (to menace); *fulvus* for *fulgvus* beside *fulgeo*, *flagro*, &c.; *lues* for *lugves*, if it be connected with Skr. *rug'* (vexare), Gr. *λυγρός*, *λοιγός*, L. *lugeo*, *luctus*, &c.; *faveo* and *foveo* are for *fageo* and *fogveo*, according to Corssen, who connects them with Skr. *bhag'* (colere, amare, coquere?), which he supposes to have originally meant "to heat." Curtius connects *faveo* with Skr. *bhû* (to shine), *bhûsh* (to speak), Gr. *φά-τις*, *φη-μί*, *φαίνω*, *φά-ος*, L. *fu-ma*, *fu-ri*, *fu-teor*, *fu-cies*, *fu-illa*, &c. *G* is lost before *m* in *fulmen* for *fulgmen*, *flūmen* for *flagmen* beside Skr. *bhrûg'* (to shine), Gr. *φλέγω*, *φλόξ*, L. *flagro*, *fulgeo*, *fulvus* (for *fulgvus*), &c.; *frumentum* beside *fruges*; *rumino* for *rugmino* beside Gr. *ἔρυνγί* (a vomiting), L. *ructo*, *erūgo*, used by Ennius in the line *contempsit fontes quibū sese erugit aquae vis*; *stimulus* for *stigmulus* beside \*Skr. *tig'* (to be sharp), Z. *tighri* (an arrow), Gr. *στίζω*, *στίγμα*, L. *distinguo*, *instigo*; *umor*, *umecto* for *ugmor*, *ugnecta* from I. E. *ug*, whence Skr. *uksh*, Gr. *ύγρός*; *fames*, according to Bopp, for *fugmes* beside Skr. *bhaksh* (to eat), Gr. *ἔ-φαγ-ον*, L. *fuba* (for *fagva*?), but Curtius rejects this account of *fames* on the ground that a nominal suffix cannot signify *desire*; *exāmen* from *exago*; *contamino* beside *tango*, R. *tag*.

Initial *h* is lost in *olus* = *holus* = *folus*; *aedus* = *haedus* = *faedus*; *ircus* = *hircus* = *fircus*; *er* = *her* (a hedgehog) = Gr.

\* *Frugi* meant *utilis*; Qui *frugi homines χρησίμους* appellant, id est tantummodo utiles; at illud est latius (Cic. Tusc. III. 8, 16). Ulfilas translates Gr. *ὠφέλιμος*, *εὐχρηστος* by Goth. *bruks*. In the expression *homo frugi*, *frugi* can be only a genitive like *nihili*, *nauci*, *floci*, *pensi*, &c., but whether it be the gen. of a noun in *-um* or *-ium* cannot be decided. Consult Corssen, *Nachträge*, &c., p. 83.

χήρ (a hedgehog); *anser* beside Skr. *hansa* (a goose), Gr. χήν, O. H. G. *gans*; *arrina* (lard) beside Skr. (Ved.) *hirā* (intestines), Gr. χολάδες, χόλιξ, χορδή, L. *haru-spez*, *har-iolus*, *hira* (entrails), *hilla* for *hirula*; &c.\* *H* is lost before *l* in *lūtum* whence *lūteus* (yellow), *hlū* being = χλω in Gr. χλω-ρός (yellow); the root of this word was probably an I. E. *ghar* (to shine) whence on one side came Skr. *hiraṇa*, *hiraṇya* (gold), Z. *zaranu*, *zaranya* (gold), Gr. χρυσός, χρυσίον, Goth. *gulth*, Ch. Sl. *zlato*, and on another, Skr. *hari* (green, yellow), Z. *zairi* (yellow), Gr. χλόη, χλόος, χλωρός, L. *helus*, *holus*, *flavus*, *helvus*, O. H. G. *grōni*, *crōni* (green), Ch. Sl. *zeliže* (olera), Lith. *želiū* (viresco), Ir. *glas* (green): Bopp connects *viridis* with Skr. *harit*, supposing that *gviridis* was the original form, but all the forms in the cognate languages point back to a root *ghar* and not *ghrar*.

Medial *h* is lost in *mī* = *mihi*; *nemo* for *nehemo*; *nīl* = *nihil*; *remens* = *vehemens*; *Ala* = *Ahala*; *cors* = *cohors*; *debeo* = *dehibeo*; *praebeo* = *praehibeo*; *aenum* = *ahenum*; *pīus* beside Volsc. *pihom* (pium), U. *pihaclu* (piaculum); *ria*, *reu* for *reha* from *reho*; *prendo* = *prehendo* for *praeheundo*, *praeda* for *prae-hid-a*, both from R. *hed* = I. E. *ghad* whence Skr. *hasta* (manus) for *had-ta* (?), Gr. χανδάνω, ἔ-χαδ-ον, L. *hasta* for *had-ta*, *hēd-era* (the "clinging" shrub), Goth. *bi-git-an* (to find), E. *get*; *bīmus* for *bihimus*† (so *trīmus*, *quadrīmus*, &c.) beside Skr. *hima* (snow) Z. *hima* (a year), *zima* (winter), Gr. χειμών, χιών, L. *hiems*, Ch. Sl. *zima* (hiems); *lana* perhaps for *lahna* = Gr. λάχνη; *aranea* for *arahnea* beside Gr. ἀράχνη from I. E. *ark* (to spin) whence Gr. ἄρκυς, ἀρκάνη (a thread, seam), ἡλακάτη; *velum* for *rellum* beside *verillum* from *veho*.

Initial *j* is lost in *uxor* beside *conjux* from *jungo*. Some connect *uxor*‡ with Skr. *vas'* (to wish for), *vas'á* (a woman), Gr.

\* Consult Corssen über Aussprache, Vokalismus und Betonung der Lateinischen Sprache, p. 49.

† *Bīmus* may be for *bi-amnus*, c. f. *sol-ennis*.

‡ *Uxor* has also been connected with Skr. *uksh* (to sprinkle), whence Skr. *ukshan* (a bull).

ἑκών. Pott has suggested two explanations of the word, both equally wrong, (1) *uxor* = "she who is carried off" from *vah* (to carry) and suffix *-tor*, but a passive sense never coexists with this suffix, (2) *uxor* = "ducta femina" from Skr. *vah* + *stri* (a woman).

Medial *j* (*y*) is lost in *domo* for *domayo* = Skr. *damayâmi*, *amo* for *amayo*, &c.; *loceo* for *doceyo*, &c.; *audio* for *audiyo*, &c.; *doceam*, *doceyam*, &c.; *audiam* = *audiyam*, &c.; *ferreus* = *ferreyus*, *aureus* = *aureyus*, &c.; *liga*, *quadriga* for *bijuga*, *quadrijuga*; *cuncti* for *cojuncti*; *hornus* for *hogornus*, *yor-* corresponding to Z. *yâre* (a year), Gr. ὥρα, E. *year*; *minor* for *minyor*, *minus* for *minyus*, the comparative terminations *-ior*, *-ius* being = I. E. *-yâns*, *-yas*, Skr. *-iyâns*, *-iyas*; O. L. *plous* (plus) for *ployus*, *pleores* (plures, Carm. Arv.) for *pleyores*; *pris-* (in *pris-tinus*, *pris-cus*) = *prius* for *proyos*; *ero* for *esyô* beside Gr. ἔσσομαι = εἰσομαι; *obex* for *objex*; *abicio* = *abjicio*; *-bus* (term. of dat. pl.) = Skr. *-bhyas*.

Initial *t* is lost in *lātus* for *tātus* beside *tollo*, O. L. *tulo*, &c.

Medial *t* is lost in *ac* for *atc* = *atque*; *mitsi* for *mitsi* from *mitto*; *lens* for *lents* = *lentis*, *mens* for *ments* = *mentis*, *sors* for *sorts* = *sortis*, &c.; *primas* = O. L. *primatis*, *optimas* = O. L. *optimatis*, *Samnis* = O. L. *Samnitis*, *Tiburs* = O. L. *Tiburtis*, &c.; *miles* for *miletis*, beside *milit-em*; *quartus* for *quat(u)rtus*.

Initial *d* is lost in *Juppiter*, *Jovis*, U. *Jupater* beside O. L. *Diovis*, O. ΔιουϜει (dat.), &c.; *viginti* for *dviginti*.

Medial *d* is lost in *hoc* for *hode*; *corculum* for *cordculum*; *pēs* for *pēds*; *suāsi* for *suādsi*; *frons* = *frondis*; *concors* = *concordis*; *glans* for *glands*; *māno* for *madno* beside Gr. μαδάω (madeo), L. *mād-idus*, &c.; *mercenarius* for *mercednarius*; *finis* for *fidpis* beside *findo* from R. *fid* = Skr. *bhid* (findere), E. *bite*; *scalae* for *scadlae* beside *scando*, Skr. *skand* (scandere); *suāvis* for *suādvīs*, Gr. ἡδύς, &c.; *squāma* for *squādma* from I. E. *skad* (to cover) beside Skr. *k'had* (tegere), *k'hadman* (occultatio, alienae formae assumptio), perhaps *sku* (tegere), Gr. σκορός, σκιά, σκηνή, Goth. *skildus* (a shield), *skalja* (tegula), Ir. *scath*

(shade), &c. ; *caementum* beside *caedo* ; *ramentum* beside *rado*. The prefixes *sēd-* (*sēd-itio*), *rēd-* (*red-eo*, *red-igo*, *redi-vivus*),\* *prōd-* (*prōd-esse*, *prōd-eo*, *prōd-igus*) lose their final *d* before a consonant, as in *sēgrego*, *sējugo*, *sēduco*, *sēvoco*, *rēducor*, *rēpono*, *rēmovo*, *prōduco*, *prōmitto*, &c.

Initial *s* is lost in *cutis* for *scutis* beside Skr. *sku* (to cover), Gr. *σκῦτος*, *κύτος*, L. *ob-scu-rus*, *scu-tum*, Lith. *skurà* (skin), A. S. *hūd* (a hide) ; *caveo*, *cautus* from R. *skav* beside Skr. *kavi* (wise, a poet), Gr. *θυο-σκού-ς*, *κόεω*, *κοννέω* (I perceive) = *κοFνεω*, *κοῤ* (*ἀκούει*, Hesych.), *ἀκούω* for *ἀ-κοF-ω*, *ἔ-κο-μεν* (*ἡσθομεθα*, Hesych.), Goth. *us-skav-jan* (to be cautious), *skaus* (cautious), *skauus* (beautiful), O. H. G. *scauwōn* (to look), G. *schauen*, *schön* ; *caedo* for *scaedo* beside Skr. *k'hid* (to tear, cut) Z. *skid* (to tear asunder), Gr. *σκίζω*, *σκίδη*, *σχινδαλμός* (a splinter), L. *scindo*, Goth. *skaida* (I separate), O. H. G. *sceit* (discissio), O. N. *skīd* (lignum fissum) ; *cena* for *cesna* = *ced-na* for *sced-na* from I. E. *skad* (to eat, lit. to cut, cleave) whence Skr. *khād* (to eat) ; *cedo* may be also connected with last root beside Gr. *ἐκεκῆδει* (*ὑπεχώρει*, Hesych.), *κεκαδῆσαι* (*βλάψαι*, Hesych.), *κῆδος*, &c., the idea of *cutting asunder* being closely connected with that of *separation*, and then with that of *sorrow* ; *capis* (a vessel) from St. *capid* = O. U. *kapir*, *capulum* (the hilt of a sword, a bier), *capedo*, *capisterium*, &c., if Froehde, Corssen,† and others be correct in connecting these words with Gr. *σκαφίς*, *σκάφη* (a basin, skiff), *σκάπτω*, *κύπετος* (a trench), Ch. Sl. *kopati* (fodere), Lith. *kápas* (a grave), Goth. *skip* (a ship), *ga-skap-jan* (to make), G. *schoppen* (a scoop), *schaufel* (a shovel), &c. ; but it is much preferable to connect *capis*, &c., with L. *capio*, *capax*, Gr. *κύπη* whence was borrowed L. *cupa*, Goth. *hafja* (I lift), M. H. G. *haft* (vinculum), E. *heave*, *haft*, &c. ; *tego*, *tegula*, &c., for *stego*, &c., beside Skr. *sthaḡ* (to cover), Gr. *στέγω*, *στέγος*, *τέγος*, L. *istega* (a cover)

\* *Re-div-ivus* is explained by some as meaning "*shining again*," from R. *div*.

† Consult Corssen's *Nachträge*, &c., p. 293, and K. Z. xiii. 452.

for *instega*, Lith. *stogas* (a roof), O. N. *thek* (a roof), O. H. G. *dakju* (I cover), E. *thatch*, *deck*; *tundo*, *tudes* (a hammer), &c., for *stundo*, &c., beside Skr. *tud* (to strike), Gr. *Τυδεύς*, Goth. *stauta* (I strike), O. H. G. *stōzu*; *torus* for *storus* beside Skr. *star* (sternere), Gr. *στόρνυμι*, *σπατός*, &c., L. *sterno*, *stramen*, &c., Goth. *strauja* (*στροώννυμι*), O. H. G. *strāo* (straw), Ch. Sl. *strěti* (extendere), Corssen supposes that initial *s* is also lost in *littera*, *linea*, *limus*, *lino* beside O. H. G. *slim*, G. *schleim* (slime); *nurus* for *snurus*, beside Skr. *snushā*, Gr. *νός*, O. H. G. *snur*, A. S. *snor*, Ch. Sl. *snochū*; *na-re*, *na-ta-re*, *nā-sus* for *sna-re*, &c., beside Skr. *snā* (lavare), Gr. *νῆσος*, *Νάξος*; *nix* for *snix* beside Z. *s'nizh* (to snow), Gr. *ἀγάννιφος* for *ἀγασνιφος*, Goth. *snaivs* (snow), Lith. *snigti* (to snow), Ch. Sl. *sněgŭ* (snow); *nutrix* beside Skr. *snu* (to flow), according to Corssen who explains it to mean "the person who makes to flow," viz. "milk," as *stator* signifies "the person who causes to stand;" *repo* for *srepo* beside L. *serpo*, Skr. *sarpa* (a serpent); *rete* for *srete* from *sero* beside Skr. *sarīt* (a thread), Gr. *σείρα*, *εἶρω*, *ἔρμα*, Lith. *seris* (a thread); *rivus*, *Rumo* (an old name of the Tiber), *rumen* (the udder), *Rumina* beside Skr. *sru* (to flow), Gr. *ρύος*, *ρεῦ-μα*, *ρύ-θ-μός*, &c., O. H. G. *stroum* (a stream), Lith. *srauju* (I flow); *palea* (chaff), *pulvis*, *pollen* from I. E. R. *spar* (to move quickly), when Skr. *sphurāmi* (vibror), *palāla* (straw), Z. *s'par* (to go), Gr. *σπαίρω*, *ἀσπαίρω*, *σπείρω*, *σπαράσσω*, *πα-σπάλ-η* (fine meal) = *παι-πάλ-η*, *παλύνω*, *πάλλω*, *πάλη* (pollen), &c., O. H. G. *sprua* (chaff), *spor* (vestigium), *sporōn* (calcitrare), *spurnan* (offendere), E. *spurn*, L. *sperno*, Lith. *spirti* (to push), &c.; *pituia* for *spituia* beside *spuo*, *spu-tum* from I. E. *spyu* beside Skr. *shṭiv* (spuere), *πτύω* for *σπγυω*, *ψύττ-ω*, *πυτ-ίζω* for *πτυ-πτι-ζω*, a frequentative form, Goth. *speiwa* (*spuo*), O. H. G. *spiuwan*, *spīhan* (to spit), Lith. *spidu-ju* (I spit), &c.; *fallo*, *fides*, *funda*, *fungus* beside Gr. *σφάλλω*, *σφίδη*, *σφενδόνη*, *σφόγγος*; *memor* for *sme-smor* beside Skr. *smar* (to remember), *smara* (love), Gr. *μέρ-μηρ-α*, *μέρ-ι-μνα*, *μάρτυρ*, &c. *St* is lost before *l* in *lātus* = O. L. *stlā-*

*tus* beside *sterno*, &c.; *lis* for *stlis* beside O. H. G. *strit*, G. *streit* (a fight); *locus* for *stlocus* beside Skr. *sthalā* (a place), from *sthal*, a secondary root formed from *sthā*: Bopp, however, connects *locus* with Skr. *lōka* (mundus), Lith. *laukas* (campus).

Medial *s* is lost between two vowels in *viola* for *visola* beside Skr. *viṣa* (poison), Gr. *λός*, ῥον, L. *virus*, Benfey remarks, "poison is connected with blue, cf. *viṣa-pushpa* (the blue lotus), and Śiva's neck growing blue, by swallowing the poison churned out of the sea;" *Cerealis* for *Cēresalis* beside *Ceres*, *Cerēris*; *Ramnes*, *Tities*, *Luceres* for *Ramneses*, *Titises* *Luceseres*; *spei* for *spesi* beside *speres* (nom. pl. in Ennius); *ver* for *veser* beside Skr. *vas-anta* (ver), Gr. *ἔαρ* for *Ἑσάρ*, Lith. *vas-ara* (summer), Ch. Sl. *ves-na* (ver), O. N. *vār* (ver); *vis* perhaps for *visis* beside *vires*, *virium*; *diēs* perhaps for *diesis* beside *diur-nus*, *Dies-piter*, *ho-dier-nus*, Skr. *divas-a* (day), *Divas-pati* (the lord of day, i. e. Indra); *nūbēs* perhaps for *nubēsis* beside Skr. *naḥas* (nom. neut.), Gr. *νέφος*, *νέφε(σ)-ος*, Lith. *dėbesis* (nubes); *sēdēs* perhaps for *sēdesis* beside Skr. *sadas* (nom. neut.) = Gr. *ἔδος*; and perhaps some other cases like *nubes* and *sedes*. Medial *s* is lost before consonants in the following cases:—*digredior* for *disgredior*; *dijudico* for *disjudico*; *trājicio* for *transjicio*; *diduco* for *disduco*; *trāduco*, *trādo* beside *transduco*, *transdo*; *īdem* for *isdem*; *judex* for *jusdex*; *nīdus* for *nisdus*, E. *nest*; *prīdie*, *prīdem* for *prisdie*, *prisidem*; *audio* perhaps for *ausdio* beside *aus-culto*, *aur-is*, Gr. *οὔς*, Lith. *ausis* (the ear); *cena* for *cesna*; *pono* for *posno* beside *pos-ui*; *aeneus* for *aesneus*; *satin* for *satisne*; *audin* for *audisne*; *pōne* (behind) for *posne*; *ānus* for *asnus* beside Skr. *āsana* (a seat), *āste* = Gr. *ἥσται*, &c.; *pēnis* for *pesnis* beside Skr. *pasas* (penis), Gr. *πῶς*, *πῶσ-θη*; *fanum* for *fasnum* = O. *f<sup>as</sup>isnu* beside *fes-tus*, *fer-iae*, Gr. *θεο-σάμενοι*, &c.; *canus* for *casnus*, but Bopp considers that the original form of the root was *skan* whence Skr. *kan* (splendore), Goth. *skeina* (I shine); *vēnum* for *vesnum* beside Skr. *vasna* (price); *corpulentus* for *corpuslensus*; *quālus* (a basket),

beside *quasillus*; *diligo* for *disligo*; *tenebrae* for *tenesbrae*; *dimitto* for *dimitto*; *rēmus* for *resmus* = *retinus*, Gr. ἑρεμύς; *Cāmena* for *Casmena* beside *carmen*, Skr. *s'ās* (to say, teach), *s'āns* (to praise), with which Benfey connects *censeo*, *cano*, *concin-n-us*,\* but the two latter words belong to Skr. *kvan* (sonare); *pomoerium* for *pos-moerium*; *dumus* beside *dusmus* (incultus, dumosus), *densus*, Gr. δασύς, δαυλός for δασυλος, Ἐπί-δau-ρος for Ἐπίδασυ-ρος, Δαυλῖς for Δασυλῖς. The words *ec* and *ser*, as we have already seen, become *e-* and *se-* in composition, except before *c*, *t*, *p*; thus we have *egero*, *educo*, *se-decim*, &c., but *extendo*, *expello*, &c.

Medial *n* is lost before *gn* in *ignatus*, *ignarus*, *ignoro*, *cognatus*, *cognatus*, &c.; *signum* is connected by Ebel with Skr. *sañg'na* (sign, name), and therefore stands for *singnum*, *sin-* being found also in *sin-guli*, *sin-cerus*, *simplex* and *-gnu-mi* being from R. *gnō* = Skr. *g'nā* (to know). The preposition *con* (= *com*) frequently loses its final *n* before *h*, *j*, *v*, and *s* in composition; thus we find *cohibeo*, *coicio*, *cojunx*, *coventio*, *cosol*, &c. *N* is lost before *s* in *istega* for *instega* (deck), *isculpo-neae* from *insculpo*, *intresecus* beside *intrinsecus*. In Umbrian we likewise find *kuveitu* = L. *convehito*. *kuvertu* = L. *convertito*, *covortust* = L. *converterit*, &c.

Medial *r* is lost in *rubigo* for *rubrigo* from *ruber*; *pejero* for *perjero*; *sempiternus* from *semper*; *pēdo*, *podex* beside Skr. *pard*, Gr. πέρω; *sūsum* = *sursum*, &c.; *tostus* for *torstus* from *torreo*; *fuscus* for *furscus* beside *fur-vus*; *formosus* for *formonsus*; *retrōsum* beside *retrorsum*; *Tuscus* for *Turscus* = *Etruscus*, beside O. U. *Turskum*, N. U. *Tuscom*: *Etru-s-cust*† being formed from U. *etru-* (alter) as *pri-s-cus* from *pri* = *prae*, *-s* being the remains of the comparative termination *-ius*, *Etrusci* therefore meant *exteri* "the strangers" in Umbrian.

\* Lottner connects *con-cin-nus* with *cin-cin-nus*, in which case the root must have meant "to connect, to twist."

† Consult Corssen, *Über Aussprache*, &c, vol. i., p. 92, and his *Kritische Nachträge*, &c., p. 177.

Medial *l* appears to be lost in *cingere* = *clingere* (Fest. 56) beside O. H. G. *hring* (a ring).

Initial *p* is perhaps lost before *r* in *red* beside Skr. *prati*, Gr. *πορί*. It is lost before *l* in *lien* beside Skr. *plihan* (lien), Gr. *σπλήν*, *σπλάγχνον*; *laetus* for *plaitus* beside Skr. *prī* (to love, to rejoice); *lanx* beside Gr. *πλάξ*, L. *planca* (a plate), *plūnus* for *placnus* (?), O. H. G. *flah*; *lātus*, *Latium* beside Skr. *prath* (to extend), *pr̥thu* (broad), Gr. *πλατύς*, *πλάτος*, L. *planta* (sole of the foot), *plānus* for *platinus* (?), *plautus* for *plotus*, (planis pedibus, Fest. 239); *later* (a tile), which is perhaps connected with last root; *linter* or *lunter* beside Gr. *πλυντήρ* from R. *πλυ* whence *πλέω*. The connexion of *lavo* with R. *πλυ* is very doubtful; it is better to connect it directly with Gr. R. *λυ* whence *λῦμα*, *λουτρόν*, &c. Pott also connects *livor*, *lividus*, with Gr. *μόλυβος*, *μόλιβος*, L. *plumbum*, O. H. G. *pli*, Lett. *alva*; but this too is very doubtful.

Medial *b* is lost in *sus* = *subs* in *suscipio*, *sustuli*, *susque*, *surgo* for *susrigo*; *surpio* beside *subripio*; *oportet* for *obportet*, beside *pars*, *portio*; *operio* for *obperio* beside *a-perio*; *opimus* for *obpimus* beside Skr. *pyāi* (crescere), *pīvara* (crassus), Gr. *πίων*, *πῑαρός*, *πιμέλη*.

Initial *f* is perhaps lost in *rīgeo*, *rīgor*, *rīgidus* beside Gr. *ῥίγος* for *φριγος*, &c., L. *frīgeo*, *frīgus*, *frīgidus*.

Medial *f* is lost, according to Corssen, in *illim*, *istim*, &c., for *illo-fim*, *isto-fim*, &c., *-fim* being = Skr. *-bhyam*.

Initial *v* is lost in *olla* (a pot), for *vorula* from I. E. *var* (to boil), whence Gr. *βράσσω*, *βράζω* (I boil), O. H. G. *walm* (fervor), Ch. Sl. *vrěti* (fervere), Lith. *virti* (to boil), &c.; *odi* beside Skr. *vadh* (to strike), Gr. *ὠθίω*; *orno* beside Skr. *varṇa* (colour). In these cases *a* becomes *o* on account of the preceding *v*. Initial *v* is also lost in *rigo* beside Gr. *βρέχω*, Goth. *rign* (*βροχή*) from I. E. *vragh*; *repente*, *repens*, *repentinus* beside Gr. *ρέπω* for *φρεπω*, *ἀντί-ρροπος*, &c., Lith. *virpiu*, (I totter), *radix* beside Gr. *ρίζα*, Lesb. *βρίσδα*, Goth. *vaurts* (a root),

O. H. G. *wursala*, *wurza*; *ros* perhaps for *vros* beside Skr. *varsh* (pluere), Gr. ἔρση for ἑρση; *laqueus* beside Gr. βρόχος, Goth. *vruggō* (a noose); *lacer*, *lacus*, *lacinia* beside Skr. *vras'k'* (to tear), Gr. ῥάκος, λάκος, λακίς (a rent), Æol. βράκος (= ῥάκος) which points back to a root *ῥακ*, Benfey connects Gr. ἔλακος, L. *ulcus*, with this root; *lacio* beside Gr. ἔλαω from R. *ῥελακ*, Lith. *velkù* (I pull), with which Corssen connects *laqueus*; *lupus*,\* Sabine *irpus*, beside Skr. *vrkas* (nom. sing. masc.), Gr. λύκος, Goth. *vulfs*, Ch. Sl. *vlǫkŭ*. Lith. *vilkas*, connected by some with Skr. *vras'k'* (to tear), and by others with an I. *ῥε vrak*, whence Gr. ἔλαω; *lana* perhaps for *vlana* beside Skr. *var* (to cover), ἄρνη (wool), *urubhra* (a ram, lit. the woolbearer), Gr. ἑρως, ἔριον, οὔλος (woolly), ἄρνες (lambs), βαρνίον (ἄρνιον Hesych.), βάριχοι (ἄρνες Hesych.), L. *vellus*, *villus*, Goth. *vullu* (wool), Lith. *vilna* (wool), Ch. Sl. *vlŭna* (wool).

Medial *v* is often lost between vowels as in *snus* = O. L. *snvos* = Gr. ἰός; *tuis* for *toros* = Gr. τεός; *momentum* for *movimentum*; *ploro* for *plovero* from R. *plu*, according to Corssen; *domui*, *habui*, &c., for *domavi*, *havevi*, &c.; *mor* for *moror* from *moveo*; *Mars* for *Mavors*; *nuntius* for *noviventius*; *praes* for *praeres*, the plural of which, *praerides*, is found in Thorian law, from *prae* and *vas*; *junior* for *juvenior*; *rursum* for *revorsum*; *nosse* = *novisse*, &c.; *amaram* = *amaveram*; &c.; *audisti* = *audivisti*, &c.; *nolo* for *nevolo*; &c. *V* is lost after *c* in *canis* beside Skr. *s'van* (a dog), Gr. κύων; *cano* beside Skr. *kvan* (to sound): and after *s* in *si* (= O. *svai*), *se*, *sibi*, *sed* from St. *sva*; *somnus* = Skr. *svapnas*, Gr. ὕπνος; *soror* = Skr. *svasâ*, Goth. *svistar*; *sodalis* from a lost stem *sodâ* beside Skr. *svadhâ*

\* Some separate L. *lupus* from Gr. λύκος, and connect it with Z. *urup-is*, *raop-is* (a species of dog), from root *rup* or *lup* (to tear). The Sabine *irpus* bears a great resemblance to the Zend words. It is not clear whether this group of words is connected in any way with Gr. ἀλώπ-ηξ, Lith. *lâpë* (a fox), *lapûkas* (a young fox).

(the will, properly "one's own action" from *sva* and *dhā*),\* Gr. *ἥθος*, *ἔθος* from R. *σφεθ*, the form *ἐθέθωκα* (*εἶθωκα* Hesych.) proving that the root originally contained F, L. *suesco*, Goth. *sidus* (*ἥθος*), G. *sitte* (custom); *sonus* beside Skr. *svan* (to sound); *socer* = Skr. *s'vas'uras*, Gr. *ἐκυρός*; *socrus* = Skr. *s'vas'rūs*; *sermo* perhaps for *sterno* beside Skr. *svat* (to sound), Gr. *σῦριγξ*, L. *susurrus*, *absurdus* (compare *absonus*); *serenus*, *sol* beside Skr. *svat* (heaven), Z. *hvarē* (sol), Gr. *Σείριος*, *σέλας*, *σελήνη*.

Initial *m* is lost in *imago* and *imitor* for *mimago* and *mimitor* beside Skr. *mā* (to measure), *mimatē* (imitantur), Gr. *μέτρον*, *μιμέομαι*, *μίμησις*, *μίμος*.

Corssen connects *imitor* and *imago* with a Latin root *ic* = I. E. *ak*, whence G. *ah-men*, L. *aequus*, and considers their original forms to have been *icmitor*, *icmago*.

## §. 85. THE INSERTION OF A CONSONANT.

*P* is inserted between *m* and a following dental, as in *hiemps*, *emptus*, *sumpsi*, *sumptus*, *contempsi*, *contemptus*, &c. *S* is inserted in *mon-s-trum* (from same root as *maneo*, *moneo*, *mens*, &c., and *-trum*), *lu-s-trum* (from same root as *luo*, *di-luv-ium*, *lav-o*, &c., and *-trum*), *abstineo*, *ostendo* for *obstendo*, *sustineo* for *substineo*.

## §. 86. FINAL CONSONANTS.

The combinations *rs*, *ls*, *ns*, are in general never allowed to end a word, except when they represent *rts*, *lts*, *nts*; thus we have *ferens*, *amans*, &c., for *ferents*, *amants*, &c., *puls* for *pults*, &c., but *puer* for *puer(u)s*, *vir* for *vir(u)s*, *quatuor* for *quatuor(e)s*, *vigil* for *vigil(i)s*, *novōs* (acc. pl.) for *novons* and similar accusatives, *sāl* for *sāls*. We have, however, *fers* for *feris*.

\* This is Curtius' explanation, who translates *dhā* by G. *thun*, E. *do*; Kuhn explains *svadhā* to mean "selbstsetzung" from *dhā* (to place) = Gr. *θε* in *τιθημι*.

Double consonants are never allowed to end a word : thus we have *os* (*oss-is*) for *oss-* = *ost-* ; *fel* (*fell-is*) for *fell-* = *felt-* ; *novōs* for *novoss* = *novons*, *novas* for *novass* = *novans*, &c., while in Old Oscan the acc. pl. still ends in *-ss*, as *vīuss* = L. *vias*, &c. ; *damnas* for *damnass* = *damnat(u)s*, compare O. U. *pihas*, N. U. *pihos* = L. *piatus*, O. U. *tapez*, N. U. *taçes* = L. *tacetus*, O. O. *hürz* = L. *hortus*, &c.

Two mutes are not allowed to end a word : thus we have *lac* for *lact* (*lact-is*).

Final *t* was frequently lost : thus we find in Old Latin *dede* (*dedit*), *dedro* (*dederunt*), &c. ; in Classical Latin the double form of the 3 pl. perf. *fecere* and *fecerunt*, &c. ; in late Latin such forms as *viæse* (*vixit*), *quiesce* (*quiescit*), *fecerun* (*fecerunt*), &c. In Umbrian such forms are common : thus we find *habe* (*habet*), *façiu* (*faciat*), *fuia* (*fuat*), *portaia* (*portet*), *benus* (*venerit*), *convortus* beside *convortust* (*converterit*), *benuso* (*venerunt*), &c. In Oscan *t* is retained, as in *fust* (*fuerit*), *fefacust* (O. L. *faxit*), *hipust* (O. L. *habessit*), &c.

Final *d* was also frequently lost : thus in abl. sing. we find *patre* (t. Scip. Barb.) beside *Gnaivod* and in Classical Latin this abl. *-d* was universally lost, while it was retained in Oscan, as in *sivad* (*suā*), *ehtrad* (*extra*), *toutad* (*civitate*), *castrid* (*castro*), &c. Similarly *d* was lost in the imperatives *esto*, *agito*, &c., beside Osc. *estud*, *actud*, &c.

In Old Latin *s* was frequently lost after a vowel, as in *Tetio*, *Albanio*, &c., for *Tetios*, *Albanios*, &c. ; *Corneli* for *Cornelis*, and this again for *Cornelios*, &c. ; in Classical Latin we also find *mage* beside *magis*, *pote* beside *potis*, *laudare* beside *laudaris*, &c. Final *s* was also lost in the nom. pl. of the *o-* stems, and in the gen. sing. of the *a-* stems, as in *hi* = O. L. *heis*, *magistri* = O. L. *magistreis*, *familiae* = *familias*, &c. In Oscan and Umbrian *s* (N. U. *r*) is retained in these cases, as in O. U. *urtas* (*ortae*), *tutas* (*totae*), N. U. *screihtor* (*scripti*), *totcor* (*tutici*), *totar* (*totae*), *motar* (*multae*, *poenae*), O. O. *Nivlanis* (*Nolani*), N. O. *pas* (*quae*), *scriptas* (*scriptae*), &c.

Final *n* was sometimes omitted as in *ceteroqui*, *alioqui* for *ceteroquin*, *alioquin*, and in nominatives in *-o* as *virgo*, *caligo*, &c.

Final *m* in Old Latin was frequently omitted as in the conjunctive forms *attinge*, *dice*, &c., for *attingam*, *dicam*, &c.; also in the following examples from the Epitaphs of the Scipios *Taurasia* (acc. sing.), *Samnio* (acc. sing.), *oino* (unum), *duonoro* (bonorum), *urbe* (urbem), &c.; in Classical Latin *m* before a vowel in verse was elided.

## CHAPTER VII.

## ROOTS AND STEMS.

§. 87. The root\* of a word is that portion of it that remains when everything *formative* and *accidental* has been removed from it. Thus the root of L. *pater*, Gr. *πατήρ*, Skr. *pitâ* (nom. sing.) is *pa* = Skr. *pâ* (to support), L. *-ter*, Gr. *-τηρ*, Skr. *-tar* being the same suffix that appears in L. *mater*, &c.; the root of *elementum* is *el*, *e* being a connecting vowel and *-mentu-m* the same suffix that appears in *rudimentu-m*; the root of *ἐρίθερο* is *θε*, *ἐ* being the augment signifying past time, *τι* the reduplication signifying duration, and *το* the sign of the 3rd pers. sing.; similarly the root of *ἐγίγνετο* for *ἐγιγενετο* is *γεν*; the root of *ζεύγνυμι* is *ζυγ* for *νυ* and *μι* are *formative* elements, the first signifying present time, and the second the first pers. sing., while *εϋ* is the *guna* of *υ*, and *ε* is consequently merely an accidental element;† similarly the root of *λέλοιπα* is *λιπ*. In the above remarks I have used the word root in its ordinary signification as representing that portion of the

\* Max Müller (Lectures, &c., II., p. 81) calls "root or radical whatever, in the words of any language or family of languages, cannot be reduced to a simpler or a more original form." The Indian Grammarians called a root *dhātu* from *dhâ* (to nourish); *dhātu* means *any primary or elementary substance*, and consequently shows that these grammarians looked upon roots as the *primary elements, the constituent parts* of words. We generally translate roots by the infinitive, as this gives the most abstract idea of the word. The Indian Grammarians, however, represent them by abstract substantives in the Locative, as *gam* (to go) by *gatáu* (in going); Bopp's Skr. Gram., p. 69.

† Consult Curtius, Grundzüge, &c., p. 49 seq., and Bopp's Comparative Grammar, vol. I., p. 197.

word which contains the fundamental idea; but properly speaking, every Indo-European word consists of *two or more* roots: thus Skr. *asmi* (I am) = Gr. *εἰμί* consists of the two roots *as* (to be) and *mi* = *mā* (I); Skr. *bharāmi* (I bear) = Gr. *φέρω*, consists of the three roots *bhar* (to bear), *as* (to be)\* and *mi* (I); Skr. *bharati* (he bears) = Gr. *φέρει* for *φερει* consists of the three roots *bhar*, *a* (a demonstrative root) and *ti* (the pronoun of 3rd pers. sing.); Gr. *ὦψ* = L. *vox* = I. E. *vaks* when Skr. *vāk* (nom. sing.) comes from the two roots *vak* (to speak) = Skr. *vach* and *sa* (a demonstrative root), &c. In the earliest period of the I. E. language, long before any separation of the dialects occurred, roots existed as *independent* words, exactly as in Chinese at the present day; thus the words, just discussed, probably existed then as *as ma*, *bhar as ma*, *bhar a ta*, *vak sa*. There never was a period, however, in the history of Sanskrit, Greek, Latin, or any other I. E. language, after their separation from the parent stock and from each other, when roots existed as actual words. No exception to this statement is formed by such imperatives as *dic*, *fac*, &c., for these are merely shortened forms of *dice*, *face*, &c., nor by such vocatives as *vāk* from St. *vāk* (voice) from R. *vak*, for a vocative is not properly a word, but rather an interjection, nor by words which in the process of time appear only as roots on account of the loss of their terminations.

§. 88. All Indo-European roots are monosyllabic, and this is the only law to which they are subject. We consequently find as roots the following combinations of vowels and consonants:—

I. (Spiritus lenis +) Vowel: I. E. *i* (to go) = Skr., Z., Gr., L., Goth., Lith., Ch. Sl. *i* (to go), as Skr. *émi* (I go) = Gr. *εἶμι* = Lith. *eimì*, L. *eo*, Skr. *imas* (we go) = Gr. *ἴμεν*, L. *imus* (the *i* of which seems to point to a root *i*); Skr. *u* (to sound)

\* I assume here that *bharāmi* is for *bhar-as-mi* (to bear am I, i. e. I bear): the second syllable may, however, be the only demonstrative root *a* lengthened to *ā*.

is given by the grammarians ; L. *u* is found in *ind-u-ere*, *ex-u-ere*.

II. Cons.+vowel : I. E. *da* (to give), Skr., Z. *dā* (to give), Skr. *dadāmi* = Gr. *δίδωμι*, Skr. *dātā* (nom. sing. from St. *dātar*) = Z. *dāta* (from St. *dātar*) = Gr. *δοτήρ* or *δωτήρ* = L. *dātor*, L. *dāre*, *dōnum*, &c. ; I. E. *pa* (to guard), Skr. *pā* (id.), *pati-s* (nom. sing., a master), *patnī* (a mistress), Gr. *πόσις*, *δεσ-πό-της*, *πότνια*, *δεσποίνα*, L. *com-po-(t)s*, *po-t-is*, &c. ; I. E. *dha* (to place), Skr. *dhā* (id.), Z. *dā* (id.), Gr. *θέ-μα*, *τί-θη-μι* = Skr. *dadhāmi*, &c. ; I. E. *ki* (to lie), Skr. *sī* (id.), *s'ētē* = Gr. *κεῖται*, L. *civis* (= Osc. *cevs*), *quiesco*, &c.

III. Vowel + cons. : I. E. *ak* (to be sharp, quick), Skr. *as'-ri* (point of a sword), *ās'-us* = Gr. *ᾰκύς*, *as'-vas* = L. *eq-uus*, Gr. *ᾰκ-ρος*, *ᾰκ-ων*, L. *ac-er*, *ac-u-o*, *āc-er*, *ōc-iōr* ; I. E. *ap* (to obtain), Skr. *āp* (id.), L. *ad-ip-iscor*, *aptus* = Skr. *āptas* ; I. E. *ad* (to eat), Skr. *ad* (id.), Gr. *ἔδ-ω*, L. *ed-o* ; I. E. *as* (to be), Skr. *asmi* = Gr. *εἰμί* (Æol. *ἔμμι*) = L. *(e)sum*, &c.

IV. Cons. + vowel + cons. : I. E. *bhugh* (to fly, bend), Skr. *bhug'* (to bend), *bhōga* (a snake), Gr. *φεύγω*, *φυγή*, *φύζα* = *φυδγα* for *φυγγα*, L. *fugio*, &c. ; I. E. *ṛip* (to smear), Skr. *līp* (id.), Gr. *λίπ-α* (fat), *ἀ-λείφ-ω*, &c. ; I. E. *pak* (to bind), Skr. and Z. *pas'* (id.), Gr. *πάγ-ος*, *πάσσαλος* = *πακγαλος*, L. *pax*, *pig-nus*, *compesco* = *com-pec-sco*, &c. ; I. E. *bhudh* (to know), Skr. *budh* (id.), Z. *bud* (id.), Gr. *πυνθ-άνομαι*, &c.

V. Cons. + cons. + vowel : I. E. *kru* (to hear), Skr. *s'ru* (id.), Gr. *κλύ-ω*, L. *clu-o*, *cli-ens* ; I. E. *plu* (to swim), Skr. *plu* (id.), Gr. *πλέ-ω*, *πλεύ-σομαι*, *πλό-ος*, L. *plu-it*, &c. ; I. E. *pri* (to love), Skr. *prī* (id.), Z. *frī* (id.), Gr. *πῤῥος* for *πρᾱγ-ος*, *πρᾱύς* for *πρᾱγ-ύς* ; I. E. *sta* (to stand), Skr. *sthā* (id.), Z. *s'tā* (id.), Gr. *στά-σις*, L. *stā-tus* ; I. E. *gva* (to go), Skr. *gī-gā-mi* (I go), Gr. *βαίνω* for *βα-νγω*, L. *ar-bi-ter*.

VI. Vowel + cons. + cons. : Skr. *ard* (to kill), Gr. *ἄρδ-ις* (point of an arrow) ; I. E. *ard* (to water) ; Skr. *ārd-ra* (wet), Gr. *ἄρδ-ω* (I water) ; I. E. *argh*, Skr. *arh* (to be worthy), Z. *areg'* (id.), Gr. *ἄρχ-ω*, *ἄρχ-αμος* ; I. E. *arg* (to shine), Skr. *arg'-una* (white), Gr. *ἀργ-ής* (white), *ἄργ-υρος*, *ἄργ-ιλος*, L.

*argentum*, *arg-u-o* (I make clear); I. E. *ark* (to shine), Skr. *ark* (id.), *arka* (the sun), Ir. *earc* (id.); I. E. *ardh* (to grow), Skr. *ardh* (id.), Gr. ἀλδ-αίνω, Ir. *alt* (nursing), according to Bopp.

VII. Cons. + cons. + vowel + cons. : I. E. *stigh* (to ascend), Skr. *stigh* (id.), Gr. στείλ-ω, στοῖ-χος, στίχος, Goth. *steiga* (I go up), O. H. G. *stega* (semite), Ch. Sl. *stīza* (id.); I. E. *stag* (to cover), Skr. *sthaḡ* (id.), Gr. στέγ-ω, στέγ-η, τέγ-η, L. *i-steg-a* (a deck) for *in-steg-a*, *teg-o*, O. N. *thek* (a roof), O. H. G. *dak-ju* (I cover); I. E. *bhrag* (to shine), Skr. *bhrāḡ* (id.), Gr. φλέγ-ω, φλόξ, L. *fulg-eo*, *flag-ro*, *flam-ma*; I. E. *stan* (to sound), Skr. *stan* (id.), Gr. στένω, L. *ton-o*, *ton-itrū*, O. N. *styn-ja* (I groan), O. H. G. *stun-ōd* (a sigh), E. *stun*.

VIII. Cons. + vowel + cons. + cons. : I. E. *varg*, Skr. *varg'* (to exclude), Gr. εἶργ-νυ-μι, εἶργ-ω from R. Φεργ, L. *urg-eo*, Goth. *vrik-a* (I pursue); I. E. *marg*, Skr. *marg'* (to wipe, rub), Gr. ἀμέλγ-ω (I milk), ὀμόργ-νυ-μι (I wipe), L. *mulg-eo*, O. H. G. *milch-u*. Benfey connects with this root Gr. γάλαγος (for μλαγος), γάλα, L. *mulier*, *margo*, *lac* (for *mlac*); I. E. *tars* (to dry), Skr. *tarsh* (to be thirsty), Z. *tarsh-na* (thirst), Gr. τέρσ-ομαι, L. *torr-eo*, *tos-tus*, *terr-a*, Goth. *thaur-s-ja* (I thirst).

IX. Cons. + cons. + vowel + cons. + cons. : I. E. *skand* (to move quickly?), Skr. *skand* (to ascend), Gr. σκάνδ-αλον, L. *scand-o*, *de-scend-o*, Lith. *skènd-u* (I sink); I. E. *stambh*, Skr. *stambh* (to prop up), Gr. στέμφ-υλον (pressed olives), ἄ-στεμφ-ής (firm), O. H. G. *stamphōn* (to stamp), A. S. *stemn* (mandatum); I. E. *sparg* (to move quickly), Skr. *sparh* (to desire), Z. *s'parez* (to strive), Gr. σπέρχ-ομαι (I hasten), σπερχ-νός (hasty), σπέργ-δην (ἐρρωμένως, Hesych.); I. E. *spardh*, Skr. *spardh* (to contend with), Goth. *spaurds* (στάδιον), O. H. G. *spurt*, A. S. *spyrð*, E. *spurt*.

§. 89. It is very doubtful whether any roots began or ended with three consonants in Indo-European. When such roots appear in any of the Indo-European languages, either one of the consonants is not original, and merely a late addition to the root, or else the phenomenon arises from transposition. In the following cases the conjunction of the three initial con-

sonants may be original : Gr. *στράγξ* (a drop), *στραγγ-εύω* (I twist), *στρογγ-ύλος*, *στραγγ-α-λίζω* (I strangle), L. *string-o*, *strang-ulo*, O. H. G. *strangi* (strong), from a root *strang* or *strag*, signifying "to penetrate, to press," yet the original form of this root may have been *\*starg*, whence Gr. *ταργάναί* (*πλοκαί*, Hesych.), *τεταργανωμένοι* (*ἐμπεπλεγμένοι*, Hesych.), *σαργάνη* (a basket), with the loss of *τ* as in Ir. *sreang-aim* (stringo), *sreang* (a string) ; L. *scrof-a* (a sow), *scribo*, *scrob-s*, Gr. *γρομφ-άς* (an old sow), *γράφω* may point to an I. E. root *skrabh* ; L. *scruta* (trash), whence *scrutor* beside Gr. *γρύτη* (trash) ; Gr. *σκνιπ-ός* (stingy) beside *γνίφων* (id.), &c.

§. 90. Roots of the form cons. + *a* + cons. or *a* + cons. are frequently found in the form [cons. + cons. + *a*] or [cons. + *a*] : I. E. *mar* (to die) = *mra* (id.), Skr. *mṛyati* (he dies), *marta-s* (nom. sing. dead), Gr. *βροτός* for *μπο-τος*, L. *morior* ; I. E. *dhar* (to bear) = *dhra*, Skr. *dhṛ* (id.), Gr. *θρᾶ-νος* (a seat), *θρό-νος*, *θρῆ-νυς* (a stool), L. *frē-tus*, *frē-num*, *fir-mus* ; I. E. *dhar* (to sound) = *dhra*, Skr. *dhārā* (vox), Gr. *θρέ-ομαι*, *θρό-ος*, *θρῆ-νος*, *θόρ-υ-βος*, Goth. *drunjus* (a noise), E. *drone* ; I. E. *man* (to think) = *mna*, Skr. *man* (id.), Gr. *μέ-μον-α*, *μέν-ος*, *μαν-ία*, *μνά-ο-μαι*, *μνή-μη*, L. *me-min-i*, *mon-eo* ; I. E. *gan* (to know) = *gna*, Skr. *gñā* (to know), Gr. *γνω-τός*, L. *gno-sco*, Goth. *kaññ* (I know) ; Gr. *θαν* beside *θυνη*, *ξ-θαν-ον*, *θάν-ατος*, *θυνη-τός*, *θυνή-σκω*, perhaps connected with Skr. *dhmā* (to blow), and consequently *θαν* would have meant originally "to blow," hence "to breathe," and then "to expire," &c.

§. 91. According to the Indian Grammarians no Sanskrit verbal root ended in *ā*, and they write such roots either with *ā*, or with the addition of a suffix, such as *n*, *y* (*i*), *v* (*u*) ; consequently we find in place of *da* (to give), *śa* (to sharpen), *ga* (to be born), *hva* (to call), &c., the assumed forms *dā*, *śō* (for *sau*), *g'an*, *hvé* (for *hvai*), &c. The only roots that they write with *ā* are pronominal roots, such as *ta*, *sa*, &c. We see, however, at once that this is merely an arbitrary custom, for we find numerous verbal roots in Sanscrit ending in *ā* : *khyā* (to-speak)

is the original root, and not *khyā*, as we see from *akhyāt*; *gā* (to go) is found in *gā-tas* (nom. sing. part. praet. pass.), *gā-hi* (2 sing. imperat.), *ga-kkhati* (he goes), Gr. βέ-βα-μεν; *dā* (to give), *dadmas* (we give) for *dadamas*, Gr. δέ-δο-μεν, L. *dā-mus*; *dha* (to place), *dadhmas* (we place) for *dadhamas*, Gr. τί-θε-μεν, *θέ-σις*, *θε-τός* = Ved. *dhi-tas* = Skr. *hitas*; *sthā* (to stand), *ti-shṭha-ti* (he stands), *sthi-tas* = Gr. στή-τός, L. *stā-tus*; *ma* (to measure), *mi-ti* (measuring), *mi-ta* (measured), Gr. μέ-τρον; *pā* (to drink), *pibāti* (he drinks), Gr. πό-σις; *pā* (to protect), *pātis* (a master) = Gr. πό-σις, δεσ-πό-της, Skr. *pi-tar*, Gr. πᾶ-τήρ; *mā* (to think), *mati* (mind), *mātas* (nom. sing. perf. pass. part.) = *ματος* (in *αὐτό-ματος*), Gr. μέ-μα-μεν, *μα-ίωμα* (I seek), *μά-την*, *μά-ταιος* (not real, only imagined, according to Benfey); *ta* (to stretch), *tātas* (nom. sing. pass. part.) = Gr. τᾶ-τός, τέ-τᾶ-μαι; *ha* (to kill), *hāti* (a striking), *hatas* (nom. sing. perf. pass. part.) = Gr. φᾶ-τός (in *Ἀρείφαιτος*, *μυλήφαιτος*), πέ-φᾶ-μαι, &c. These roots are written by the Sanskrit grammarians under the forms *khyā*, *gā*, *dā*, *dhā*, *sthā*, *mā*, *pā*, *pā*, *man*, *tan*, *han*; but the grammatical forms above adduced prove that they also ended with *ā* in Sanskrit. In Greek and Latin we frequently find roots ending with *ā*, which corresponds to Sanskrit roots ending with *ā* or *an*; thus we find Gr. γέ-γᾶ-μεν from R. *ga* beside Skr. *g'an* (to produce, to grow); Gr. φᾶ-λός (bright), *φά-τις* from R. *pha* beside Skr. *bhā* (to shine); L. *rātus* from R. *ra* beside Skr. *rā* (to give), compare Ved. *rātam astu* with L. *ratum esto* and *reor*, &c.

§. 92. Neither in Sanskrit nor in Greek do any roots occur of the form, aspirated mute + vowel + aspirated mute, except a few dialectic forms in the former language, and the forms\* *ἐ-θάφ-θην*, *τε-θάφ-θαι*, *τε-θάφ-θω*, *τε-θάφ-αται*, *τε-*

Höpp (Vergleichende Grammatik., vol. i., p. 182, §. 104\*) accounts for these forms (except *τεθάφαται*, which he confesses his inability to explain), partly from the inclination shown by the Greeks for the combination *φθ*, and partly from the fact that *φ* in these cases was felt to belong to the root, and was therefore allowed to show itself again contrary to the usual custom.

θράφ-θαι, ἐ-θρέφ-θην, in the latter. In Indo-European, however, roots of this form were common, as is shown by the cognate languages; consult §. 31. But Sanskrit and Greek were opposed to such a combination, and always omitted the aspiration of one aspirated mute. This disinclination of Sanskrit and Greek to the proximity of two aspirates, is shown by the fact that when aspirates occur in two groups of consonants belonging to the same roots, and merely separated by a vowel, one of these aspirates, generally the first, loses its aspiration.\* Thus in Sanskrit and Greek aspirates are reduplicated generally by the corresponding unaspirated consonants, but this law did not hold in Indo-European, as we see from the Latin *fefelli*, and the Oscan *fufans, fefacust*, &c., in which, though *f* be not a true aspirate, it represents an original Indo-European aspirate. Originally the whole root was repeated in reduplicated syllables, as we see in Sanskrit intensive forms,† such as *daridrā†* (to be poor) from *drā* (to run) beside Gr. δι-δρά-σκω, ἔδραν, *daridrṣ'* or *daridrṣ'* or *dardrṣ'* from *dars'* (to see) = Gr. δερκ, *k'rikar*, or *k'arikar*, or *k'arkar*, from *kar* (to make), &c., and in such Greek forms as παμ-φαίνω for φαν-φαν-γω, μέρ-μηρ-α (care) and μέρ-μερ-ος (care-laden) from R. μερ = Skr. *smar* (to remember), μαρ-μαίρω (I shine) from R. μαρ whence μάρ-μαρ-ος (stone, marble, lit. "what glistens"); Κέρ-κυρ-α (lit. Round town) from same root as κίρ-κ-ος (a ring), κύ-κλ-ος, L. *circus*, &c.

\* This does not happen when the aspirates belong to different roots or different suffixes, or when one belongs to a root and another to a suffix, or when more than one vowel intervenes between the groups of consonants, except in a few cases, such as *εε-χειρία* from *ἔχω* and *χείρ* *ἡλεθάω* from R. *θαλ* for *θαλθα-ω*, an irregular reduplicated form like *φίρ-β-ω* from R. *φερ* = Skr. *bhar* and *φί-β-ομαι* for *φι-βι-ομαι* from R. *φι* = *bhī* (to fear), &c.

† Consult Bopp's Sanskrit Grammar, p. 343 seq., and Grassmann in K. Z., vol. xii., p. 111.

‡ Lottner considers *daridrā* to be a reduplicated form of I. E. *dar* (to tear).

Although in Greek we generally find no combinations such as aspirated mute + vowel + aspirated mute, we frequently find such as spiritus asper + vowel + aspirated mute or  $\rho$  + vowel + aspirated mute; thus we find  $\acute{\alpha}\phi\text{-}\acute{\eta}$  (a fastening, lightning) from  $\acute{\alpha}\pi\text{-}\tau\omega$ ;  $\acute{\upsilon}\phi\text{-}\acute{\eta}$  (a web) from R.  $\acute{\upsilon}\phi$  = I. E. *vabh* whence Skr. *úrna-vá-bhas* (nom. sing. a spider, lit. a weaver of wool);  $\acute{\eta}\theta\text{-}\mu\acute{o}\varsigma^*$  (a strainer) from  $\acute{\eta}\theta\omega$  =  $\sigma\acute{\eta}\theta\omega$  (I sift);  $\acute{\epsilon}\phi\text{-}\theta\acute{o}\varsigma$  from  $\acute{\epsilon}\psi\omega$  beside  $\acute{\upsilon}\psi\omicron\nu$ ,  $\acute{\omicron}\pi\text{-}\tau\acute{o}\varsigma$ , the initial aspirate perhaps compensating for  $\pi$  (as in  $\acute{\iota}\pi\tau\alpha\mu\alpha\iota$  =  $\pi\acute{\iota}\pi\tau\alpha\mu\alpha\iota$  from I. E. *pat*), if the root be  $\pi\epsilon\pi$ , whence  $\pi\epsilon\pi\text{-}\tau\acute{o}\varsigma$ ,  $\pi\acute{\epsilon}\pi\text{-}\omega\nu$ , &c.;  $\acute{\upsilon}\theta\text{-}\lambda\omicron\varsigma$  (idle talk), from R.  $\acute{\upsilon}\delta$ , whence  $\acute{\upsilon}\delta\omega\rho$ , or from same root as Skr. *vad* (to speak);  $\acute{\rho}\omicron\phi\text{-}\acute{\epsilon}\omega$  (I swallow),  $\acute{\rho}\omicron\phi\text{-}\acute{\alpha}\nu\omega$  (id.) beside L. *sorbeo*, Lith. *srebiù* (I swallow);  $\acute{\rho}\acute{\iota}\phi\text{-}\acute{\eta}$  (a throwing) beside  $\acute{\rho}\acute{\iota}\pi\text{-}\tau\omega$ , &c. In these cases the spiritus asper either is inorganic, and did not exist in Indo-European, or represents a lost consonant, generally *s*, and the same may be said of the aspiration of  $\rho$ ; in no case does either aspiration seem to represent an original aspirated mute.

§. 93. In Sanskrit we find several combinations of more than one syllable classified as roots, but such forms are not *true* roots. They arise either from the reduplication of true roots, as *g'ágar* (to wake) from I. E. *gar* whence Gr.  $\acute{\epsilon}\gamma\epsilon\acute{\iota}\rho\omega\ddagger$  for  $\gamma\epsilon\gamma\epsilon\acute{\iota}\rho\omega$ , *k'a-kús* (to shine) from *kás* (id.), &c.; or from the union of prepositions with true roots, as *avadhír* (to despise) from *ava* ( $\acute{d}\epsilon$ , *ab*) and *dhír*, which Bopp connects with *dhî* (the mind), *sañgrám* (to fight) from *sam* (Gr.  $\acute{\sigma}\acute{\upsilon}\nu$ , L. *cum*) and *kram* (to go), unless it be a denominative formed from *sañgráma* (a fight), &c.; or from nouns, as *kumâr* (to play) from *kumâra* (a boy), &c.

§. 94. Roots in general may be divided into the two great

\* This word is generally written  $\acute{\eta}\theta\mu\acute{o}\varsigma$ , the spiritus asper becoming the lenis on account of the\* following  $\theta$  as in  $\acute{\epsilon}\chi\omega$ . On Sigeian Inscription it is written  $\acute{\eta}\theta\mu\acute{o}\varsigma$ .

† Some consider initial  $\epsilon$  here to be merely *prothetic*, while Pott derives it from  $\acute{\epsilon}\kappa$ . The view taken above is, however, much more plausible.

classes, *verbal* (called also *qualitative* or *predicative*), and *pronominal* (called also *demonstrative*). The first class is composed of verbs and nouns, of which the former stand in a closer connexion with the root than the latter. *Originally* there was no difference between verb and noun, the root *da*, for example, signifying the *giver*, the *thing given*, the *act of giving*, &c. The second class consists of all the pronouns, most prepositions, conjunctions, and particles, which are generally derived from pronominal roots, and perhaps a few other words. In this class the root and the stem are identical, and the roots express some relation to the speaker, while those of the first class express a *state* or *action*.

§. 95. The chief pronominal roots in Indo-European were\* *kva* (who) whence Skr. *ku-tas* (whence), *ka-s* (who), *ka-d* (what) *ki-m* (what), Gr. τίς, πότερος, Ion. κότερος, πῶς, Ion. κῶς, τέ, κα-ί (an old locative), κέν (κέ, Dor. κάν) = Skr. *ham*, L. *quis*, *quae*, *quid*, &c.; *ga* or *gha* (perhaps derived from *kva* or *ka*), whence Skr. *ha* = Ved. *gha* or *ghâ* (indeed), Gr. οὐ-χί, γέ; *ya* (who) whence Skr. *ya-s*, *yâ*, *ya-d* = Gr. ὅς, ἦ, ὅ, L. *jam*; *i* (he, she, it) when Skr. *i-yam*, *id-am*, *i-ha* (here) for *idha*, Gr. ἴ, -ί (in οὐροσί, &c.), L. *is*, *ea*, *id*, *i-terum*, *i-pse*, &c.; *ta* (this) Skr. *tam*, *tâm*, *tad* = Gr. τόν, τήν, τό, Gr. οὗ-τος, αὐ-τός, L. *is-te*, *is-ta*, *is-tud*, *tum*, *tam*, *ipse* (for *i-p-te*), *i-ta*, *i-tem*, &c.; *da* (perhaps derived from *ta*), Skr. *ka-dâ* (when), Gr. πο-δα-πός, οὐ-ρι-δα-νός, ὤ-δε, δόμον-δε (homewards), L. *quam-do*, *qui-dam*, *in-de*, *un-de*, *qui-dem*, &c.; *dha* (closely connected with *da*), Skr. *a-dhas* (below), *adhara-s* (= L. *inferu-s*), *i-ha* (here) for *i-dha*, Gr. ἔν-θα, πό-θι, αὖ-θις (Ion. αὖ-τις), ἔν-θεν, L. *u-bi* and *i-bi*, according to Leo Meyer for *cu-dhi* and *i-dhi*; *sa* (he), Skr. *sa*, *sâ* = Gr. ὁ, ἡ, Skr. *sa-kṛt* (once), Gr. ἄ-παξ, ἄ-πλους, O. L. *sum*, *sam*, *sos*, *sas* (acc. sing. and pl., masc. and fem.), &c.; *na*, *an*, *ana*, Skr. *nas* (us), *na* (not, lest; like, Vedic), *ana-yâ* (instr. sing., through her), *an-tara-s* (alius), *an-ya-s* (alius), Gr. νῶ, νί-ν, νή, νῦν, νά, ἄν, ἐν, ἀνά, L. *nos*, *ne*, *num*,

*nam*,\* *in*, &c.; *pa*, Skr. *a-pa* (away), *pa-râ* (away), Gr. ἀ-πό, πει-ρί, πα-ρά, π-ρό, L. *ab*, *p-ro*, *pe-r*,† &c.; *bha* (which is, perhaps, connected with *pa*; there does not appear to be any trace of a stem *ba*), Skr. *-bhis* (term of instr. pl.), *-bhyas* (term. of dat. and abl. pl.), *-bhyâm* (term. of instr., dat. and abl. dual), Gr. ἄμ-φω = Skr. *u-bha* (both) = L. *ambo*, βίη-φι, ναῦ-φιν, L. *ti-bi*, *mi-hi*, *no-bis*, &c.; *va*,‡ Skr. *va-yam* (we), which Bopp considers to be a weakened form of *ma-yam*, but E. *we*, Goth. *reis*, G. *wir*, establish the originality of the initial *v*, Skr. *vas* (ye, acc. pl.) and *vâm* (ye two, acc. dual), Gr. αὖ, αὐ-τός, οὖν (?), αὐ-τάρ, L. *ne-ve*, *vos*, *tu* = *t-va* (Skr. *tvam*, thou), &c.; *ma*, Skr. *mâm* and *mâ* (me, acc. sing.), *ma-yâ* (instr. sing.), Gr. μέ, μά, μή (= Skr. *mâ*, not), μέν, L. *me*, *ego-me-t*, &c.

§. 96. No verbal root can by itself form a word. It becomes a word by the addition of a pronominal root; thus from the Latin verbal roots *reg* (to rule), *luc* (to shine), we form the words *rex* (*reg-s*) and *lux* (*luc + s*) by the addition of the pronominal root *sa*.

§. 97. Verbal and pronominal roots frequently agree in form: thus *i* is a verbal root meaning 'to go,' and a pronominal root meaning 'he'; similarly *ta* (to stretch) and *ta* (this), *ka* (to be sharp) and *ka* (who), unless *kva* be the original form of this pronominal root, as is probable. In consequence of this agreement, some writers have derived the pronominal from the verbal roots: thus Schleicher (Compendium, §. 265, p. 642, 2nd Ed.), writes: "I take *ma* (I) to be identical with the verbal root *ma* (to measure, think); this root also signifies 'homo' (compare Skr. *ma-nu-*, Goth. *ma-n-*), who was described as

\* *Nam* is derived by some writers from I. E. *nâman* (a name).

† L. *per*, *pro*, Gr. παρά, &c., may, however, be all connected with I. E. root *par* (to penetrate, cross, &c.).

‡ *Va* originally meant "is, ea, id." We have Old Persian *ava* (iste) from same root. Initial *t* was probably lost before Skr. *vas* and *vâm*; compare Skr. *tvam* (thou) = *t + va + m* for *ta + va + m*.

'*the thinker*;' what could '*I*' have been originally save '*man*'? The abstract conception of the '*I*' cannot certainly be attributed to the oldest stage of the Indo-European (*ursprache*).'' Bopp adduces as an argument against the deduction of pronominal roots from verbal, his supposition, that no verbal root ends in *ā*, whilst pronominal roots for the most part end in this vowel. We have, however, already seen that many verbal roots do actually end in *ā*, so that this argument of Bopp is valueless. The Indian grammarians derive all words, without exception, from verbal roots, either existing or invented by them for this purpose; thus, *ta* (this, he) they derive from *tan* (to stretch), *ya* (who) from *yag* (to worship, *yadi* (when) from *yat* (to make an effort), &c. Such derivations are of course preposterous; but these grammarians are not the only persons who offend in this way.

The connexion between verbal and pronominal roots is still unknown, and likely to remain so, for we have no materials on which to base our reasonings. A few sentences of Indo-European, as it was spoken when the Indo-Europeans first began to exist as a distinct race, would probably clear up the difficulty.

Even if verbal and pronominal roots were originally identical, they must have been distinguished from each other in very early times, in fact, before the origin of any grammatical forms whatsoever, for these forms presuppose the distinction. "First," writes Curtius (*zur Chronologie der Indogermanischen Sprachforschung*, p. 205), "through this duality light and shade come into language, first through this it becomes possible to arrange words beside each other so as to express a meaning, the necessary condition of all further development."

§. 98. Verbal roots are twofold, *primary* and *secondary*. The primary consists (1) of a single short vowel, as *ī* (to go); or (2) of a consonant + a short vowel, as *dā* (to give), *dhā* (to place), *pā* (to drink), *kī* (to lie); or (3) of a short vowel + a

consonant, as *ād* (to eat), *āk* (to be sharp), *ās* (to be), *īdh* (to burn); or (4) of a consonant + a short vowel + a consonant, as *dār* (to tear), *bhār* (to bear), *dīv* (to shine), *pāl* (to fall, fly); or (5) of two consonants + a short vowel, as *stā* (to stand).

The last division (5) of these roots is very small, and perhaps belongs to the *secondary* class.

*Secondary* roots are formed from *primary* by the addition of a new sound, or sounds, called by Curtius the *root determinative*. The object of this addition is to express a modification of the meaning of the primary root. Thus from I. E. *yu* (to bind, to mix dough, &c.), came I. E. *yug* (to unite *intentionally*, to yoke horses), and I. E. *yudh* (to unite for the purpose of fighting); from I. E. *gan* (to produce), came *gnā* (for *ganā* or *gna* + *a*) to express the idea of "*knowing how to produce*;" similarly from I. E. *man* (to think), came *mnā* (to remember); &c.

§. 99. A complete list of the primary and secondary roots of Indo-European does not fall within the scope of the present work. It will be sufficient here to give a few examples of the chief *root-determinatives*.

*K* (root-determinative). Primary root, I. E. *tar* or *tra* (to move), whence Skr. *tarala* (tremulous), *tara* (a passage), -*tara* (term. of comparative) = Gr. -τερο = L. -*ter* (in *dex-ter*), -*trā* (in *con-tra*), *ter-minus*; secondary root, Skr. *tark* (to suppose, lit., to turn in one's mind), *tarku* (a spindle), Gr. ἀ-τρεικ-ής, ἄ-τρακ-τος (a spindle), L. *torqu-eo*, *torc-ular*, *torqu-es*. Pr. root, I. E. *pat* whence Skr. *pat* (to fall, fly), *pat-ra* (a wing), Gr. κατα-πτή-την, πίπτω for πι-πει-ω, πέτ-ομαι, πτε-ρόν, πτώ-σις, L. *pet-o*, *penna* = O. L. *pesna* for *pet-na*; sec. root, Gr. πτᾶκ, ἔ-πτακ-ον, πτήσσω for πτηκ-γω, πτώξ, πτώσσω for πτωκ-γω. Pr. root, I. E. *gva* (to go), whence Skr. *gā* or *ga* (to go), Gr. βα; sec. root βακ, Gr. βάκ-τρον, L. *bac-ulum*. Pr. root, Gr. ὀλ (to destroy), ὀλ-λυμι for ὀλ-νυ-μι; sec. root, ὀλεκ, ὀλέκ-οντο. Pr. root, I. E. *var* (? to draw) whence Skr. *var* (to choose), L. *vel-lo* for *vel-yo*; sec. root, Gr. Φελκ, εἶλκον =

ἔελκον. In English we similarly find roots lengthened by *k*, as *hark*, *talk*, *pluck*, beside *hear*,<sup>\*</sup> *tell*, *pull*.

*G* (root-det.). Pr. root, *yu* (to bind; sec. root, Skr. *yug-a* (a yoke, pair), Gr. ζυγ-όν, L. *yug-um*.

*Kh* for *sk* (root-det.) = Skr. *k'h* = Gr. χ. Pr. root, *gva* (to go) = Skr. *ga*; sec. root, Skr. *gak'h-ati* (he goes) = Gr. βάσκ-ει. Pr. root, *ar* (to move); sec. root, Gr. ἔρχ-ομαι = ἔρσκ-ομαι probably. Σκ here is perhaps the remains of a root = I. E. *sak* to (follow) whence L. *sequ-or*, &c.

*T* (root-det.). Pr. root, Skr. *dyu* = *div* (to shine); sec. root, Skr. *dyut* (id.). Pr. root, I. E. *av* (to blow), whence Gr. αὔ-ω, ἄ-ημι; sec. root, Skr. *ât-man* (breath), Gr. ἀῦτ-μήν, ἀτ-μός, ἄετ-μον (πνεῦμα, Hesych). From the sec. root, Skr. *tup* (to strike) = Gr. τυπ comes another sec. root, Gr. τύπ-τ-ω. Similarly from Gr. θαπ or ταφ, comes a sec. root, θάπ-τ-ω.\* It is doubtful whether ταφ or θαπ be a primary or a secondary root; if it be = Skr. *tap* (to burn) beside Gr. τέφ-ρα, L. *tep-eo*, A. S. *thef-ian* (aestuary), it is a primary root and originally meant "to burn" (sc. the dead). On the other hand, if it be formed from *dha* (to place) = Skr. *dhâ*, by the root-determinative *p*, it is a secondary root, θαπ (ταφ) : *dhap* : : θυπ (τυφ) : Skr. *dhûp* (to fumigate).

*D* (root-det.). Pr. root, I. E. *ska* (to cleave) whence Gr. R. κε (= σκε), κε-ίω, κε-άζω, καιάδας, Skr. *k'hâ*, *k'hyâmi* (abscindo), L. *de-sci-sco*, *sci-o*; sec. root, Skr. *skhad* (to cut), Gr. σκέδ-αννυμι, L. *scindo*. Pr. root, I. E. *ma* (to measure), whence Gr. μέ-τρον, &c.; sec. root, Gr. μέδ-ιμνος, μέδ-οντες, L. *mod-ius*, *mod-eror*, *mod-us*. Pr. root, I. E. *ru* (to sound); sec. root, Skr. *rud* (to weep), L. *rud-o*.

*Lh* (root-det.). Pr. root, I. E. *yu* (to join); sec. root, Skr. *yudh* (to fight, manus conserere), Z. *yud* (to fight), Gr. ὕσ-μινη for ὕθ-μινη. Pr. root, I. E. *pa* (to suffer); sec. root, Gr. ἔ-παθ-ον, L. *pator* being formed from same root by means of a different suffix (*t*), unless Gr. *θ* and L. *t* represent an I. E.

\* These forms are perhaps only *presential* bases.

*th*, as is supposed by those who \*believe in the existence of the hard āspirates in Indo-European. Pr. root, I. E. *dar* (to sleep) whence Skr. *drā* (id.), L. *dor-mi-o*; sec. root, Gr. ἔ-δραθ-ον, δαρθ-άνω. Pr. root, I. E. *pu* (to stink), whence Skr. *pūy* (id.), Z. *pū* (id.), Gr. πύ-ον, L. *pus*, *pu-t-eo*, Goth. *fu-ls* (foul); sec. root, Gr. πύθ-ω. This root-determinative is of frequent occurrence in Greek;\* thus we have such forms as νή-θ-ω from R. νε (νέ-ω), σή-θ-ω from R. σα (σά-ω), φλεγ-ί-θ-ω, πρή-θ-ω from R. πρα = I. E. *par*, whence Ch. Sl. *pal-iti* (to burn), ἔσ-θιω from R. ἔδ, βρέ-θ-ω, ἔ-σχε-θ-ον, εἶργ-α-θ-ον, ἄχ-θ-ομαι beside ἄχ-ος, &c. Θ is frequently added to secondary roots in ν: thus from πεν = πα + ν we have πέ-πονθ-α and πένθ-ος; from I. E. *man* (to think) = *ma* (to measure) + *n*, whence Gr. μῆν-ις, μέν-ος, L. *mens*, &c., we have Gr. μανθ-άνω, μενθ-ῆραι (φροντίδες, Hesych.). Βένθ-ος which is related to βάθ-ος as πένθ-ος is to πάθ-ος, is derived from R. βεν = βα + ν from βα (to go), unless indeed in both these cases (πένθ-ος and βένθ-ος), the forms παθ and βαθ are the older, and πενθ and βενθ formed from them by the insertion of ν. Βάθ-ος, βαθ-ύς, βυθ-ός perhaps come from a root βαθ (to dive into) = Skr. *gāh* (id.) = I. E. *gva* + *dh* from *gva* (to go).

\* *S* (root-det.). Pr. root, I. E. *ark* or *rak* (to preserve), whence Gr. ἄλκ-η, ἀρκ-έω, L. *arc-eo*, *arc-a*; sec. root, Skr. *raksh* (to defend) = *rak* + *s*, Gr. ἀ-λέξ-ω. Pr. root, I. E. *tar* or *tra* (to move); sec. root, Skr. *tras* (to tremble), Z. *tares'* (id.), Gr. τρέω for τρεσ-ω, Hom. Aor. τρέσσα, τρηρός, perhaps for τρεσ-ρος, L. *terr-eo* for *ters-eo*, *tris-tis* (?). Pr. root, I. E. *dak* (to bite), whence Skr. *dans'* (id.), Gr. δάκ-νω, δάκ-ος (a bite, beast), Goth. *tah-ja* (I tear); sec. root, Gr. ὀ-δάξ-ω. Pr. root, I. E. *vag* (to increase), whence Skr. *ug-ra* (strong), ὀγ'-as (power), Z. *vaz* (to strengthen), Gr. ὑγ-ι-ής, L. *veg-eo*, *vig-eo*, *aug-eo*, Goth. *auka* (I increase); sec. root, Skr. *vaksh* (to grow), = *vak* + *s*, Gr. αὔξ-ω, ἀέξω = ἀ-Feξ-ω, Goth. *vahs-jan*, E. *wax*.

Pr. root, I. E. *dak* (to take), whence Ion. δέκ-ομαι, δάκ-τυλος; sec. root, Skr. *daksh-a* (clever), *daksh-ina* (right), Gr. δέξ-ιος; L. *dex-ter*, Goth. *taihs-vō* (δεξιά).

*N* (root-det.). Pr. root, I. E. *gva* (to gō), whence Skr. *gā* (id.), Z. *gā* (id.), Gr. ἔ-βη-ν, βα-τός, L. *ar-bi-ter*; sec. root, βαίνω = βαν-γω, O. *ben-ust* (= L. *ven-erit*). Pr. root, I. E. *ga* (to be born, to produce), whence Gr. γέ-γα-α; sec. root, Skr. *g'an* (to bring forth), Gr. γέν-ος, L. *gen-us*. Pr. root, I. E. *bha* (to shine), whence Skr. *bhā* (id.), Gr. φά-τις, L. *fa-teor*; sec. root, φαίνω = φαν-γω. Pr. root, I. E. *ta* (to stretch), whence Gr. τά-νυ-ται = Skr. *ta-nu-tē*; sec. root, Gr. τείνω = τειν-γω.

*R* or *L* (root-det.). Pr. root, I. E. *ma* (to measure), whence Skr. *mā* (id.), Gr. μέ-τρον; sec. root, Gr. μέρ-ος, μοῖρ-α, μείρ-ομαι = μερ-γομαι, L. *mēr-co*, *mer-ces*, *mer-x*. Pr. root, I. E. *sta* (to stand); sec. root, Skr. *sthal* (to stand firmly), *sthal-a* (firm ground), Gr. στέλλω = στελ-γω, L. *prae-stol-or*, *stul-tus*, *stol-idus*, O. H. G. *stel-lan* (to place). Pr. root, I. E. *sta* (to stand); sec. root, Skr. *sthir-a* (fast), *star-i* (vacca sterilis), Gr. στεῖρ-ός, στείρα = στερ-γα, Goth. *stairo* (στείρα), M. H. G. *star* (rigidus).

*P* (root-det.). Pr. root, I. E. *tar* or *tra* (to move); sec. root, Skr. (Ved.) *trp-ra* (hastening), *trap* (to be embarrassed), Gr. ἐν-τράπ-ελος, τρέπ-ω, Ion. τράπ-ω,\* L. *trep-idus*, *turp-is* (according to Benfey). This I. E. root *tra* was weakened to *tru*, whence Gr. τρύ-χω (I rub away), τρύ-σκω (id. Hesych.), τρύ-ω (id.), τρύ-μα (a hole); sec. root, Gr. τρύπ-ανον, τρυπ-άω. Pr. root, I. E. *dhu* (to move), whence Skr. *dhū* (to move, to blow), *dhū-ma-s* (smoke) = Gr. θυ-μός = L. *fu-mu-s*, Z. *dun-man* (mist), Gr.θύ-ελλα,θύ-ος, L. *sub-fi-o*, O. H. G. *tunst* (storm), O. N. *dust* (dust), Lith. *du-mas* (mind); sec. root, Skr. *dhūp* (to fumigate), Gr. τυφ-ών (a whirlwind), τύφ-ω (I

\* In these Greek works, however, π may represent an older kv, as we find in Latin *torqu-eo*, *torc-ulum*.

smoke), *τῦφ-ως* (mist). Pr. root, I. E. *da* (to cut), whence Skr. *dā* (id.), Gr. *δα-ίω*, *δα-ίς*, *δα-σμός*, *δαι-τυ-μών*; sec. root, Gr. *δάπ-τω*, *δαπ-άνη*, *δεῖπ-νον*.

*B* (root-det.). Pr. root *tri* weakened from I. E. *tra* (to move); sec. root, Gr. *τρίβ-ω*, *trib-ula*.

*Bh* (root-det.). Pr. root, I. E. *sta* (to stand); sec. root, Skr. *stambh* (to make firm), Gr. *ἀ-σσεμφ-ής* (unshaken), *στέμβ-ω* (I shake by stamping), A. S. *stemn* (stem) = *stabh* + *na*. Pr. root, I. E. *va* (to twine round), whence Skr. *va-yāmi* (I weave), Gr. *ῥ-τριον* (the warp), L. *vīnen*; sec. root, Skr. *ūrna-vābh-a* (a spider, lit. a spinner of wool, Gr. *ύφ-ή*, *ύφ-αίνω*, *ύφ-ήφ-ασμαι*.

*V* (root-det.). Pr. root, I. E. *sta* (to stand); sec. root, Skr. *sthāv-ara* (fixed), Z. *s'tavra* (strong), Gr. *σταυ-ρός*, *στεῦ-ρο*, Goth. *stiviti* (*ύπομονή*). Pr. root, I. E. *bha* (to shine); sec. root, Gr. *φά-ος* for *φαF-ος*, Æol. *φαῦ-ος*, *πι-φαύ-σκω*, Pamph. *φάβ-ος* (= *φαF-ος*), L. *fav-eo*, *fav-illa*, *fau-stus*.

*M* (root-det.). Pr. root, I. E. *tra* (to move); sec. root, Gr. *τρέμ-ω*, L. *trem-o*, *trem-ulus*. Pr. root, I. E. *gva* (to go); sec. root, Skr. *gam* (to go), Z. *gam* (id.), Goth. *quim-an* (to come). Pr. root, I. E. *da* (to bind), whence Skr. (Ved.) *dā* (id.), Gr. *δί-δη-μι*, *δε-τός*, *δέ-ω*; sec. root, Skr. *dam* (to tame), Gr. *δαμ-άω*, *δμώ-ς*, *δάμ-αρ*, L. *dom-o*, E. *tame*.

§. 98. The primary roots were chronologically older than the secondary. Some writers support the opposite, and believe that the so-called primary forms were obtained by generalization from the so-called secondary. They suppose that they were originally special terms, for different cognate ideas, e. g. for *yoking horses* (*yug*), *coming together for the purpose of fighting* (*yudh*), &c., and that from these roots was developed the general idea of *uniting for any purpose* (*yu*). This opinion is extremely unlikely; it is far more probable that the simplest form of the root was the oldest, as expressing the fundamental idea of all the secondary roots.

The oldest form of an I. E. root was perhaps either (1) *a*

+ any consonant; or (2) any consonant +  $\alpha$ . Thus the most primitive roots were  $k\alpha$ ,  $\alpha k$ ,  $d\alpha$ ,  $\alpha d$ , &c. The origin of such roots is wrapped in impenetrable obscurity, for we have no remains of any I. E. language in its radical stage to supply us with materials on which we might found our investigations. We may theorize as much as we like, but that is all that we can do. It is puerile to dogmatize.\*

§. 99. The origin of the root-determinatives is as obscure as that of the primary roots themselves. Various theories have indeed been invented to account for them; but although a few of them may be explained by these theories, the vast majority of them are still as dark as ever. Thus it has been suggested that secondary roots arise from nominal stems, e. g. I. E. *gan* (to produce), from a nom. stem *gana* derived from R. *ga* + nom. suffix *na*; but in the first place, on this theory, primitive verbs would be confounded with denominative, and in the second, very few of the usual root-determinatives ever appear as nominal suffixes, e. g. *p* is a common root-det., but never occurs as a nominal suffix. Again we are told that secondary roots are compounded of two primary verbal ones; thus I. E. *yudh* (to fight), is derived from *yu* (to join), and *dha* (to place), and consequently meant originally "to make to join," I. E. *kalp* (to make), is from *kar* (to make) + *pa* (to do), &c. Thirdly, secondary roots are said to consist of a primary verbal root + a pronominal root; e. g. the root determinatives, *k*, *t*, *m*, are identified with the pronominal roots *ka*, *ta*, *ma*: this is, however, the merest guess-work, and sheds no light at all on the subject.

We must, therefore, for the present be content to be ignorant of the origin of these secondary roots, but we need not

\* Here is a specimen of dogmatism with respect to one theory of the origin of roots. "The onomatopoeic theory goes very smoothly as long as it deals with cackling hens and quacking ducks; but round that poultry yard there is a dead wall, and we soon find that it is behind that wall that language really begins."—Max Müller, Lectures II. p. 91. •

give up all hope of being ever able to account for them, for it is quite possible that at some future period, when the non-Indo-European languages shall have been thoroughly studied and their connexion with the Indo-European family discovered, these root-determinatives may be easily explained.

### §. 100. STEMS.

The stem of a noun or verb is that portion of the word that remains after the case-endings or personal endings have been removed. The first class of stems is called *nominal*, and the second *verbal*. Thus the nominal stems of Skr. *dēvas* (nom. sing. a god), *aśvasya* (gen. sing. a horse), Gr. ἵππος, ἵππου, L. *divus*, *equus*, &c., are Skr. *dēva*, *aśva*, Gr. ἵππο, L. *divo*, *equo*, &c. The verbal stems of Skr. *imas* (we go) = Gr. ἴμεν, Skr. *bharati* (he bears) = Gr. φέρει, L. *imus*, are Skr. *i*, = Gr. *ι*, Skr. *bhara* = Gr. φερε, and L. *i*.

Stems may be of three kinds: (1) they may consist of the root alone, its vowel being sometimes affected by *guna* or *vrddhi*; (2) \*of the root + a pronominal suffix, the vowel of the root being affected as in (1); (3) of the union of two stems so as to form a single new one.

I. *Stems formed from the root alone\** are such as Skr. *ē* in *emi* (I go), *i* in *imas* (we go), from R. *i*, the *guna* of which is *ē*, Gr. *ὀπ* in *ὄψ* from R. *ὀπ*, &c. We find many examples of nominal stems consisting of the mere root, such as Gr. *ὀπ*, the vowel of the root being sometimes lengthened as in Skr. *vāk* (the voice), from R. *vak* (to speak). Thus in Skr. we have *yudh* (a fight), *kshudh* (hunger), *mud* (joy), *bhī* (fear), *drs* (the eye), *vis* (a man), &c., from the verbal roots *yudh*, *kshudh*, &c. In Greek we have *φλογ* (φλόξ) from R. *φλεγ*, &c. In Latin we have *ped* (*pēs* = *pēds*) from I. E. *pad* (to go), *vōc* (*vōx*) = Skr.

\* Consult Schleicher Compendium, pp. 346 seq., 374 seq., and Curtius zur Chronologie, &c., pp. 218 seq.

*vāk*, &c. Curtius supposes that the signification of such stems as these was originally a mean between an infinitive and a participle, and nearly the same as that of English forms in *-ing*; e. g. *vis'* (a man) from *vis'* (to enter), originally meant "the *entering*" person; *drs'* (the eye) from *drs'* (to see) meant "the *seeing*" faculty; &c.

In stems of this first class the root was sometimes reduplicated, as in Skr. *dadāmi*= Gr. *δίδωμι*, &c.

II. *Stems formed from the root + a pronominal suffix*, are such as Skr. *dēva* (a god) from *dēv*, the *guṇa*-form of R. *div* (to shine), and pronominal suffix *a*; Skr. *divya* (celestial) from *div* + *ya*; Skr. *bhāra* (a burden) = Gr. *φορο* from Skr. *bhār* the *guṇa*-form of *bhār* (to bear) = Gr. *φερ* and pron. suffix *a*; Skr. *bhāraya*, the stem of *bhārayati* (he makes to bear) from *bhār* + *a* + *ya*, and similar causative forms; &c.

Before nominal stems were formed from roots by means of pronominal suffixes, the root itself must have been used independently as a nominal stem, for the pronominal suffix has merely an *individualizing* force, and is nearly equivalent to an *article*. In the earliest stage of Indo-European language consisted of roots placed in juxtaposition; at this period there were no stems, no case-endings, no personal endings, no distinction between noun and verb. The root *bhar*, for example, signified "*to bear*," "*bearing*," "*the burden*," "*the bearer*," &c. The next stage through which Indo-European passed was the formation of verbal stems. Nouns were now distinguished from verbs only *negatively*, that is, only by the absence of the pronominal suffixes. This stage again was followed by another, in which nominal stems were formed by the addition of these suffixes in order to individualize the root that had been used as a noun. That the verbal suffixes are older than the nominal ones is shown by the fact, that the latter are preserved in a much more perfect form in the Indo-European languages than the former; thus we find the suffixes *a*, *an*, *ma*, *ta*, &c., still kept perfect in nominal stems,

while no single personal ending is found in its original form.\* An additional proof that verbal and nominal stems were formed at different periods is supplied by the consideration that, as the same suffixes are in many cases used to form both classes of stems, a considerable period must have elapsed between the use of the same suffix in two such totally different ways. Moreover, as the original meaning of the pronoun is more manifest in the verbal stem than in the nominal, the former must have been older than the latter; thus the pronominal stem *ta* (he, she, it) is employed to form the 3 pers. sing. of the verb, as *bharati* (he bears), and also such nouns as Skr. *sthi-ta-s* (standing) = Gr. *στα-ρό-ς*, Gr. *φόρ-το-ς*, *κοί-τη*, L. *sec-ta*, *doc-tu-s*, &c., and it is obvious that its original meaning can be much more easily discovered from the verb than from the noun.

Pronominal suffixes are twofold, *primary* and *secondary*. The former are employed in forming stems from roots, and the latter in forming stems from other stems. Stems formed directly from roots are called *primary*, and those from stems, *secondary*. In many cases these suffixes agree in form: thus *a* is a primary suffix in Skr. *bhâr-a-s* (a burden) = Gr. *φόρ-ο-ς*, Skr. *dêv-a-s* (a god) = L. *div-u-s*, &c., and a secondary suffix in Skr. *dâuhitr-a-s* (filix natus) from St. *duhitar*, Gr. *ἡγεμόν-η* from St. *ἡγεμον*, &c.; *ya* is a primary suffix in Skr. *madh-ya-s* = Gr. *μέσσος* (for *μεθ-γο-ς*) = L. *med-iu-s*, Gr. *μοῖρα* = *μορ-ya*, L. *exim-iu-s*, &c., and a secondary suffix in Skr. *pitr-ya-s* = Gr. *πάτρ-ι-ος*, L. *patr-ia*, &c.

III. *Stems formed by the union of two other stems* are such as Gr. *λογο-γράφ-ο-ς*, Skr. *ûrṇa-vâbha-s* (a spider), &c. Schleicher supposes that such compound stems existed in Indo-European, and adduces as examples I. E. *svastar* (soror), and *svakura* (socer).

§. 101. As there was a period when Indo-European con-

sisted merely of roots, so there was subsequently another period when it consisted merely of stems.\*

The nominal suffixes *-ant* and *-tar* are found in all the I. E. languages, and consequently must have existed in the original Indo-European. Now if *ant* is composed of the two pronominal suffixes *an* and *ta*, and *tar* of the two *ta* and *ra*, *bharanta*, *dâtara* must have been the original forms of the stems *bharant*, *dâtâr*; and if the case-endings had already existed, we would have found such forms as *bharanta-s* (nom. sing.) in place of *bharanta-s* (= Gr. *φέρων*, L. *ferens*, &c.), *bharanta-sya* (gen. sing.) in place of *bharant-as* (= Gr. *φέρωντος*, L. *ferentis*, &c.), *dâtara-s* (nom. sing.) in place of *dâtâr-s*, *dâtara-i* (loc. sing.) in place of *dâtâr-i*, &c. Now although it is possible to suppose that *bharants* came from *bharantas* from analogy with later formations, yet it is impossible to derive the oblique cases *bharantas*, *dâtari*, &c., from *bharantasya*, *dâtarai*, &c., and therefore before the oblique case-endings were attached, these stems must have already lost their final vowel.

§. 102. We have remarked that in the earliest stage of Indo-European there was no distinction between the noun and verb. In its latest stage, however, this distinction was sharply marked, firstly, by the *form*, and secondly, by the *syntactical construction* of each, the verb requiring as its complementary case an accusative, and the noun requiring a genitive. In Vedic even still many nouns, following the analogy of the verb, are construed with the accusative.

\* Consult Curtius, zur Chronologie, &c., p. 223, whom I have here closely followed.

## CHAPTER VIII.

## SUBSTANTIVES.

§. 103. All the Indo-European words are either nouns or verbs. Nouns include substantives, adjectives, pronouns, and numerals. Prepositions, adverbs, and particles were originally cases of nouns or verbal forms. No nominal stem can be used as a word; the only example of the pure stem being found independently is the vocative case, but this case is not properly a word, being only an interjection. The stem, subject only to euphonic changes, occurs in the beginning of compounds, as the representative of all the cases, and consequently it has been called *casus generalis*: thus we have Skr. *g'alamuch* (a cloud), from St. *g'ala* (water), and *much* (to pour), Skr. *rathas'āla* (a coach-house), from St. *ratha* (a coach) and *s'āla* (a house), Skr. *as'varūpa* (having the form of a horse), from St. *as'va* (a horse) and *rūpa* (shape), Gr. λογογράφος from St. λογο and γράφω, Gr. νυκθήμερον from St. νυκτ and ήμέρα, Gr. μακρόθυμος from St. μακρο and θυμός, L. *longimanus* from St. *longo* and *manus*, L. *tubicen* from St. *tuba* and *cano*.

In Sanskrit when a noun has two stems, the weaker is always employed in compounds, as in *pitṛrāg'a-s* (the God Yama, lit. the king of the Manes) from *pitṛ* the weak form of the stem *pitar*; and when a noun has three stems, strong, intermediate, and weak, the intermediate is the one always employed in these forms. The Sanskrit grammarians treat as the true form of the nominal stem that which is found at the beginning of compounds.

§. 103. There were three numbers in Indo-European,

*singular, dual, and plural.* The dual is of later formation than the plural and derived from it, as is proved by the forms of its case-endings. \*In Pâli the dual is found only in the words for *two* and *both*, while in Prâkrit it is entirely lost. It did not occur in Æolic Greek, and is lost in Modern Græek. In Latin it is only found in *duo* and *ambo* (nom. and acc. masc. and neut.); the feminine and the other cases of these two words are treated as plurals: even *duos* and *ambos* are found in the oldest poets, beside *duo* and *ambo*; the neuter *dua* was used in vulgar Latin, and finally crept into the literary language, as in *post dua lustra* (Orestis trag. 26). There is no trace of the dual in Umbrian; N. U. *dur* (two) has assumed the plural ending.

§. 104. There were three genders in Indo-European, *masculine, feminine, and neuter*; the last was called *klira* (an eunuch) by the Sanskrit grammarians. In Semitic and Hamitic, the latter including Egyptian, Ethiopian, Libyan, and Hottentot, we only find two genders, masculine and feminine, while no distinction\* of gender is found in Tataric (Tungusian, Mongolian, Turkish, Samoyedic, Finnic), the monosyllabic languages (Chinese, &c.), the isolated languages (in Europe, Basque, in Asia, Japanese, &c.), the Polynesian, Australian, African, and American languages.

The distinction of gender was of course unknown to the

\* "It is not accidental (writes C. R. Lepsius, *Standard Alphabet*, 2nd Ed. p. 89), but very significant, that as far as I know, without any essential exception, only the most highly civilized races—the leading nations in the history of mankind—distinguish throughout the genders, and that the *gender-languages* are the same as those which scientifically, by linguistic reasons, may be proved as descending from one original Asiatic stock. The development of peculiar forms for the grammatical genders proves a comparatively higher consciousness of the two sexes; and the distinction not only of the masculine and feminine, as in the *Semitic* and *Hamitic* languages, but also of the feminine and neuter gender, exclusively expressed in the *Japhetic* branch, is only a further step in the same direction."

Indo-European in its *radical* stage, just as it is at present unknown to radical languages, such as Chinese, &c. Such a distinction was impossible when language consisted merely of roots placed in juxtaposition. Moreover, at the period when verbal suffixes first made their appearance, the difference of gender was not marked, for had it been so, it would have shown itself in the verb, just as the same distinction appears in the Semitic verb, proving that in this latter case the difference of gender was marked before the introduction of the verbal suffixes. The early introduction of the verbal suffixes in Indo-European also appears from the fact that they must have been introduced before the difference of *number* was marked in the noun, for had there existed at that period a plural suffix, we would have found it in the verb instead of such forms as I. E. *-masi*, *-tvasi* (or *-tasi*), *-anti*, (or *-nti*)\* for the suffixes of the *first*, *second*, and *third* persons plural respectively.

We find traces on all sides that originally there was no distinction between the masculine and feminine gender in Indo-European; c. g. the words for *father* and *mother* are formed with the same suffix (= I. E. *-tar*) in all the Indo-European family of languages. The introduction of the neuter gender took place at a period subsequent to that of the introduction of the masculine and feminine. That these three genders were all, however, introduced before the first separation occurred among the Indo-Europeans, is obvious from the agreement respecting them that pervades the whole I. E. family of languages. Various methods† were adopted of marking the difference of gender as well in Indo-European as in languages that sprang from it.

\* Consult Curtius zur Chronologie der Indo-germanischen Sprachforschung, pp. 214, 222.

† I have here followed chiefly Schleicher's arrangement; see his Compendium, p. 518.

I. *By a Change of Stem.*

While no attempt was made to distinguish the gender of diphthongal and consonantal stems, those in *-a*, *-i*, and *-u*, were lengthened to *-ā*, *-ī*, and *-ū*, to express the feminine, although this method was only very partially carried out in the *i*- and *u*-stems, and there are some important exceptions in those in *-a*. In Sanskrit, where the majority of stems in *-ī* and *-ū* are feminine, we find many both masculine and feminine as *parī-s* (the sun) *nṛtū-s* (a dancer), &c., as well as stems, formed from such roots as *dhi* (to think), *lū* (to cut), &c., such as *s'uddha-dhī-s* (a man of pure thought), *yavalū-s* (a corn-cutter), &c. Besides we find numerous feminine stems, as well as masculine, in *-i* and *-u*; e. g. *matī-s* (fem. thought), *s'uchi-s* (fem. bright), *mṛdū-s* (fem. soft). The feminines of adjectives in *-u* may also be formed by adding *ī*, as *mṛdvī* (nom. fem.), &c., except when two consonants precede, as in *pāṇḍu-s* (fem. pale), &c. Some adjectives in *-u* lengthen this vowel in the feminine, as *pāṇḍū-s* (fem. lame from St. *pāṇgu*), *kurū-s* (a female Kuru) from St. *kuru*, &c. The allocation of the *ā*-stems to the masculine, and the *ī*-stems to the feminine, was better carried out than that of the *i*- and *u*-stems; yet we find *ā* in such feminine forms as Skr. *s'ivayā* (instr. sing. of *s'ivā*), &c., and *ī* in Skr. *s'ivāt* (abl. sing. masc. and neut. of *s'ivā*), &c. In Greek we find masculine stems in *-a* (*η*, *ᾱ*) and feminine ones in *-ā* (*ο*). Thus we have as masculines, *ναυῖα*, *ἱπότερες*, *πολίτες*, &c.; and as feminines, *ἡ ὁδός*, *ἡ κέλευθος*, and other names for a road, except *ὁ στενωπός*; *ἡ νῆσος*, and the special names of islands, such as *ἡ Λέσβος*, &c.; names denoting a collection, such as *ἡ ἵππος* (a body of cavalry), *ἡ*

\* We also find in Vedic a nominative plural, both masculine and feminine, in *-āsas* where *a* is common to both genders, e. g. *dhūmāsas* (masc.) from St. *dhūma* (smoke), *yag'nāsas* (masc.) from St. *yag'na* (a sacrifice), *pṇavākāsas* (fem.) from *pṇavākā* (pure).

δρόσος (the dew), &c. ; ἡ λίθος\* (a precious stone) ; &c. In Latin we also find masculine stems in *ā*, and feminine ones in *ā* (*o*, *u*). Thus we have as masculines, *poeta*, *scriba*, *collega*, *terrigena*, &c., which originally ended in *ā*, although in classical Latin this *ā* has been shortened to *ā*, just as in Greek we find the Epic forms ἱππότᾱ, νεφεληγερέτᾱ for ἱππότης, νεφεληγερέτης : and as feminines we have *domus*, *nurus*, *alvus*, *carbasus*, *malus* (the apple tree), *pomus* (id.), *Corinthus*, *Saguntus*, &c., along with many words borrowed from the Greek, such as *atomus*, *antidotus*, *dialectus*, *diametrus*, &c. There was some irregularity among the Romans in their use of the different genders : two forms of the same word often coexisted, as *ramenta* beside *ramentum*, *caementa* beside *caementum*, *vinus* (*vinus mihi in cerebrum abiit*) beside *vinum*, &c. ; on inscriptions we find *eum sepulchrum*, *hunc munimentum*, *Corinto delete*, &c., which prove that in vulgar Latin the distinction of the genders was often lost ; moreover, in classical Latin many stems in *-o* are both masculine and feminine, such as *colus* (the distaff), *papyrus*, *pampinus* (the vine), *barbitos* (the lyre), &c. ; *vulgus*, originally a masculine *ā*-stem, is sometimes masculine but generally neuter.

In Græco-Italic times† the masculine and neuter of adjectives in *-os*, *-a*, *-om*, were distinguished from the feminine by the former changing the original *a* into *o* : thus we have Gr. νέος (m.), νέον (n.), L. *novos* (m.), later *novus*, *novom* (n.), later *novum* beside Gr. νέα (f.) and L. *nova* (f.).

\* ὁ λίθος is any stone, but Homer twice uses ἡ λ. for ὁ λ. Names of precious stones are in general feminine, but we find ὁ and ἡ σμάραγδος.

† See *Grundriss der lateinischen Declination* von Franz Bücheler (p. 4), where he remarks that the tendency of feminines to retain the older grammatical forms shows itself also in adjectives whose stems ended in *-ri*, e. g. Fem. *celeris*, *equestris*, *salubris*, Masc. *celar*, *equester*, *saluber*, where the helping vowel *e* was inserted after the loss of the final *-is*.

## II. *By different Case Suffixes.*

*S* was added to the stem to mark the nominative of the masculine and feminine genders, while the nominative neuter was represented by the mere stem, or in the case of the *ā*-stems, by the stem + *m*. In Indo-European times this *s* was already dropped in the nom. fem. of the *ā*-stems, as Skr. *navā* = Gr. *νέα* = L. *nova*. In Sanskrit it is also dropped in the case of polysyllabic feminine *ī*-stems, as *balinī* (fem. strong), except *lakshmī-s* (the wife of Vishnu), *tarī-s* (a boat), *avī-s* (mulier menstrualis, lit. not desiring), *tantrī-s* (a lute), *starī-s* (smoke). In Greek and Latin *s* is also dropped in the nominative of feminine *ī*-stems, but new suffixes are introduced in its stead, such as *-a*, *-ος* in Greek, *-es* in Latin, &c. *S* is kept in feminine *ū*-stems in Sanskrit, Greek, and Latin, as Skr. *vadhū-s* (a wife), *bhū-s* (earth), Gr. *δρῦς*, *σῦς*, L. *sūs*.\*

The nominative neuter of *ā*-stems was formed by adding *m* to the stem, as Skr. *navam* = Gr. *νέον* = L. *novom*, &c. In other cases the mere stem, subject to the euphonic laws peculiar to each language, was used as the nom. neut.: thus the following stems act as nominatives neuter, Skr. *vāri* (water), *mṛdu* (soft), *sumanas* (benevolent), &c., Gr. *ἔδρι* (expert), *γλυκύ* (sweet), *εὐμενές*, *γάλα* for *γαλακτ*, *σῶμα* for *σωματ*, *τέρας* for *τερατ*, &c., L. *mare* for *mari*, *facile* for *facili*, *genu*, *caput*, *cor* for *cord*, *corpus*, &c. Gr. *γῆρας* is neuter, but the corresponding Skr. stem *g'aras*† (old age) is feminine; similarly in Latin *vulgus* (nearly always neut.) and *virus* (neut.) correspond to Skr. *varga-s* (masc. a multitude), and *visha-s* (masc.

\* Schleicher considers that neither *ī* nor *ū* existed in Indo-European, and consequently that we cannot speak of I. E. stems in *ī* and *ū*. This is a question upon which it is difficult to pronounce a decided opinion, on account of the conflicting evidence, and it may consequently be considered at present an open one.

† The usual form of this stem is *g'arā*; *g'aras* is defective in those cases, whose case-endings do not begin with a vowel.

poison). In Latin the masc. *-s* has frequently penetrated into the neut.; thus *prudens* (St. *prudent*), *concors* (St. *concord*), *dives* (St. *divit*), *ferens* (St. *ferent*), are both masc. and neut. The Greek does not permit this confusion of the genders, for we find *φέρων* for *φερόντ*, *τιθέν* for *τιθεντ*, *χαρίεν* for *χαριεντ* beside L. *ferens*, &c. In Greek, however, we find two neuter nominatives lengthened, although no *-s* could have been lost, viz. *πῦρ* from St. *πῦρ*, and *πᾶν* from St. *παντ*.

*D* is used as a neuter suffix in the pronominal declension; it appears as *t* in Sanskrit, but the Latin, Gothic, and German forms prove\* that the I. E. form was *d*. In Sanskrit we find this *t* in *yat* (which), *tat* (it), *état* (this), *tyat* (this) from *ta* + *yat*, Ved. *kat* (which) = Skr. *kim*, *it* (an\* old neuter = L. *id*, Goth. *ita*), found in *k'et†* (even, if) = *k'a* (and) + *it*, and in *nét* (lest) = *na* (not) + *it*, *anyat* (aliud), *itarqt†* (aliud). We find on the other hand Z. *nôid* (lest) = Skr. *nét*, Z. *kad* (quod) = Ved. *kat*, Gr. *ἔρρι* = *ὅδ* + *τι*, L. *aliud*, *alid* (= *aliud*), *istud*, *id*, *illud*, Goth. *ita* (it), G. *das*, *was*, in which *s* points back to an older *t*, which represents an I. E. *d* according to Grimm's law.

*A* was the Indo-European case-suffix for the nom. pl. neuter: thus we have Z. *maulhva* (or *madhava*) = Gr. *μέθνα* from St. *madhu* = Gr. *μέθυ*, Z. *namana* = L. *nomina*, Z. *dâta* (gifts) from St. *datē*, Gr. *δῶρα* from St. *δωρο*, *τάλανα* from St. *ταλαν*, *ἱδρία* from St. *ιδρι*, L. *dona*, *maria*, *capita*, Goth. *nam-na* (names) = L. *n-mina*, &c. In Sanskrit this *a* became *i*; as in *nâmâni* = L. *nomina*, *madhu-n-i* from St. *madhu*, *dânâ-n-i* from St. *dâna* = L. *dôno*, &c. \*

The genitive singular of masculine and neuter *ā*-stems ends

\* Bopp (Kritische Grammatik der Sanskrit-Sprache, p. 173, note) supports the view that the I. E. form of this suffix was *t*, and he considers the Gothic forms to be exceptions to Grimm's law.


† Benfey connects Gr. *καί* with *k'et*: *καί* would then be derived from an older *καιδ*. Wilson derives Skr. *k'et* from R. *k'it* (to think).

‡ Beside *itarat* we also find Ved. *itaram* (nom. neut.), which may be compared with L. *iterum*.

in *-sya*, whereas that of the feminine *ā*-stems ends in *-s*; thus we have Skr. *as'vasya* (gen. sing. masc.) from St. *as'va*, Gr. ἵπποιο for ἵπποσιο beside Skr. *as'vāyās* (gen. sing. fem.) from St. *as'vā*, Gr. χώρᾱς from St. *χωρᾱ*. \*

### III.\* *By a Change of the Stem after the Separation of the various Indo-European Languages from each other.*

Thus Sanskrit masculine and neuter stems in *-i* and *-u* insert an euphonic *n* before *ā* the instrumental case-ending, as in *kavinā*, from St. *kavi* (masc. a poet), *vāriṇā* from St. *vāri* (neut. water), *bhānunā* from St. *bhānu* (masc. the sun), *tālunā* from St. *tālu* (neut. the palate) beside *gatyā* from *gati* (fem. motion), and *dhēnvā* from *dhēnu* (fem. a milch cow). Sanskrit *a*-stems also insert an euphonic *n* in the masc. and neut. instr., but they shorten the final *ā*, and change *ā* of the stem into *ē*, as in *sivēna* from St. *s'iva* (masc. the god S'iva), *gātrēna* from St. *gātra* (neut. a limb), beside *s'ivayā* = *s'ivē* + *ā* from St. *s'ivā* (fem. propitious). In the Veda we find instrumental forms without the euphonic *n*, as *mahitvanā* from St. *mahitvana* (neut. greatness), *madhvā* from St. *madhu* (neut. honey), &c. We also find in the Veda such instr. forms as *svapnayā* from St. *svapna* (masc. sleep), *kulis'ēnā* from St. *kulis'a* (masc. and neut. an axe).

In forming the genitive of Sanskrit *i*- and *u*- stems, we gunate these vowels, and add merely *s* for masc. stems, while for fem. stems we either form the genitive as in the masc. or we simply add *ās* to the stem, and for neut. stems we insert *n* before the final *as*; thus we have *kavēs*, *gatēs* or *gatyās*, *variṇas*, *bhānós*, *dhēnós* or *dhēnvās*, *tālunas* as genitives of the stems *kavi*, *gati*, *vāri*, *bhānu*, *dhēnu*, *tālu*. In the Veda, however, we find sometimes the older form of the genitive, without either the gunation of the vowel, or the insertion of *n*, as *pas'v-as* from St. *pas'u* (masc. cattle), *madhv-as* (= Gr. μέθυ-) from *madhu* (neut.), *ary-as* from St. *ari* (an enemy), as in Gr. ἰδρι-ος from St. *idri*.

The above insertion of *n* in the instrumental was not Indo-European, for we find in Zend *as'pa* = Skr. *as'vêna*, *pas'va* = Ved. *pas'vâ* from St. *pas'u*. Similarly the gunation of *i* and *u* in the gen. of masc. and fem. stems, and the insertion of *n* in neuter ones, was not original, as is proved by the Greek forms *πίτυος* (fem.) *πήχυος* (masc.) *μέθυος* (neut.) *ἰδρύος* (masc. fem. and neut.) *πόσιος* (masc.); the gunation of the genitives of the *i*- and *u*-stems, however, occurred before the separation of the Sanskrit from the Zend, or else the same course was pursued independently by each of these languages. The Gothic and Lithuanian present the same gunation of *i* and *u*, as in Goth. *sunaus* = Lith. *sūnaus* = Skr. *sûnós* from St. *sunu* (masc.), Goth. *anstais* from St. *ansti* (favor), Lith. *awės*, from St. *awi* (a sheep): these forms, on the other hand, support the opinion that the above gunation of *i* and *u* was Indo-European.

#### IV. By a Change of Case-endings, originally identical.

Thus in Indo-European the case suffix of the acc. pl. was *-ns*, while in Sanskrit masc. stems dropped the *s*, and feminine stems the *n*, the preceding vowel in each case, if short, being lengthened to compensate for the loss of the consonant: consequently we have *s'ivân*, *kavîn*, *bhânûn*, as accs. pl. of the masc. stems *s'iva*, *kavi*, *bhânû*, and *s'ivâs*, *gâtis*, *dhênûs*, as accs. pl. of the fem. stems *s'ivâ*, *gati*, *dhênu*.

#### V. By the Formation of special Stems, especially for the Feminine Gender.

Long *i* was perhaps used as a feminine suffix in the Indo-European; in Sanskrit its use as such is very common, as in *dêvi* (nom. fem. a goddess), from St. *dêva* (a god), *dhanavati* (nom. fem. rich) from St. *dhanavant*, *laghvi* (nom. fem. light), from St. *laghu*, *svâdvi* (nom. fem. sweet), from St. *svâdu*, *dâtri*

(nom. fem. a giver) from St. *dātār*. In Greek this *i* also appears in feminine forms, but its exact signification seems to have been lost, and consequently *a* was added to express the feminine more definitely: thus we have ἡδεῖα for ἡδεῖα beside Skr. *svādātī* from St. ἡδν = Skr. *svādhu*; δότεῖρα for δοτεῖρα = δοτεῖ + *a* beside Skr. *dātṛī*; σώτειρα for σωτεῖρα; θέαινα (a goddess) for θεανγα; λύκαινα (a she-wolf) for λυκανγα; τέκταινα, λείαινα,\* &c., beside τέκτων, λέων, &c.; δέσποινα = δεσποῖνα; πότνια beside Skr. *patnī* (nom. fem. a wife); ἄνασσα for ἀνακγα beside ἄναξ; &c. We also find *δ* added in Greek fem. stems to this I. E. *i* to form new stems, as in προδότις, St. προδοτιδ beside προδότης, Σκύθις, St. Σκυθιδ beside Σκυθης, Περσίς, St. Περσιδ beside Πέρσης, καπηλῖς,† St. καπηλιδ beside κάπηλος, αἰχμαλωτίς, St. αἰχμαλωτιδ beside αἰχμάλωτος, &c. Many Greek masculines have two feminines of both these classes: as λήστειρα and ληστρίς from ληστής or ληστήρ; ὀρχηστρία and ὀρχηστρίς from ὀρχηστής; ὀλέτειρα and ὀλέτις for ὀλετρις from ὀλετήρ; αὐλήτρια and αὐλητρίς from αὐλητήρ or αὐλητής. In Latin *i* is found in feminine stems, but new stems were formed by the addition of *e*, as *victrix* from St. *vict-ric*, *genetrix* from St. *genetrīc* beside Skr. *g'anitrī* (nom. fem. a mother), &c. This formative *e* has been identified by some writers with *k* in Gr. γυναικός, but this is very unlikely. Curtius

\* The stems of λέων, θηράπων, &c., are λειοντ, θεραποντ, &c., of which the termination -οντ is = I. E. *vant*. The Greek feminines in -αινα = -ανγα, and the Sanskrit ones in -vatī, therefore point back to an I. E. fem. term. -*vanti*, or else these different feminine forms were developed independently after the separation of Greek from Sanskrit. It is even possible that the Greek form is older than the Sanskrit, and that the Skr. *i* is = I. E. -*yā*.

† Bopp (Sanskrit Grammar, p. 144) adduces as additional proof of the connexion of Gr. -ιδ with Skr. -ī, the fact that the accent in many Sanskrit feminines in -ī changes in the same way as in many Greek feminines in -ιδ: thus we have Skr. *kalimāśhī* (nom. fem. variegated), *nartakī* (nom. fem. a dancer), Gr. ἡμερίς, καπηλῖς, &c., all oxytones, beside Skr. *kalimāśha-s*, *nartaka-s*, Gr. ἡμερος, κάπηλος, &c.

considers that the I. E. stem was *ganakī*, which is very probable, as we find Skr. *gānaka-s* (a father). Bopp supposes that *γυναῖκ-* meant originally "the figure of a woman," and derives it from *γυνή* and R. *ικ* (to be like), whence come *ἐ-οικ-α*, *ἐ-ίκ-την*, *ἱκελος*, &c. It is very doubtful whether *a* was ever added in Latin to form new feminine stems in *-a* from original ones in *-i*, but some Latin words apparently point to such forms: thus *gal-lina* appears to bear the same relation to *gallus* that *θεαίνα* does to *θεός*, and if so, it must be for *gallaina*; *Diana* or *Deana*, which is found on an inscription, may be for *Deaina*, a feminine similarly formed from *deus*; *regina* may likewise be for *regaina*, a feminine of *rex*. If *gallaina*, *Deaina*, *regaina* ever existed, they were probably for *gallantya*, *Deantya*, *regantya*, just as *λέαινα* is for *λεαντῖα* beside *St. λεοντ*.

§. 105. There were nine cases in Indo-European. These were the *nominative* (*casus*\* *rectus*), *accusative*, *locative*, *dative*, *ablative*, *genitive*,† two *instrumentals* and *vocative*. The last of these, though not properly a case, and generally in the singular represented by the mere stem, I nevertheless enumerate among the cases, following the common custom of doing so. These nine cases are only distinguished from each other in the singular: in the dual there are only three different case-endings, one for nom. acc. and voc., another for gen. and loc. and a third for dat. abl. and both inst. *s*: in the plural the

\* *Casus* is a translation merely of Gr. *πρῶσις*, which meant the inclination that one idea had to another, and which was expressed by the case-ending. The nominative was called *rectus* (*εὐθεία*, *ὀρθή*) because it stood erect at the beginning of the sentence, and did not depend on anything: consequently some grammarians did not consider it to be strictly a *casus*. The Sanskrit term for a case-ending is *vidhakti* (division), Pāṇ. I. 4, 104; v. 3, 1, sq.

† The Greek term for *genitive* is *γενική*, which meant *casus generalis*. *Genetivus* is properly equivalent to *γεννητική* and is a mistaken translation of *γενική*.

nom. and voc. agree in form, so do the dat. and abl., while there is only one instr.

The question now suggests itself,\* what are the relative ages of these cases? This is a question that in the present state of our knowledge can only be partially answered. The cases at once divide themselves into two groups,† the first \* consisting of the nominative, accusative, and vocative, and the second of all the rest. That the nom. acc. and voc. are closely connected together, is shown by the facts, that in the neuter they are generally all identical, and that they are never interchanged with any case belonging to the second division, while these latter cases frequently interchange with one another: e. g. in Sanskrit the ablative and genitive frequently agree in form, so do the genitive and locative dual; the instrumental is represented in Greek by the dative, and in Latin by the ablative; *-bi* is locative in L. *ubi, ibi*, and dative in L. *tibi*, this connexion of the loc. with the dat. is easily understood, for the sentence, "You gave the book to me" (dative), is equivalent to "The place where you deposited the book was I" (locative); again, the genitive and dative are closely allied, for "she is my daughter" has the same meaning as "she is daughter to me;" &c.‡

\* Consult Curtius zur Chronologie der indogermanischen Sprachforschung, p. 250, seq., whose views I have followed in the text.

† Grassmann (über die casusbildung in indogermanischen in K. Z. XII. p. 241, seq.), also divides the cases into these same two groups. The first group are formed from the stem by the addition of what he calls *die deutende anhänge*, and the second, by the addition of *die zeigende anhänge*: *die deutende* are *-s, -d, -a, -am*, and are all of pronominal origin, *die zeigende* are *-as, -at, -in, -ana, -bhi, -abhi, -av*, and are derived from prepositions; these latter, he says, only enter in those cases where a prepositional origin is probable, and where prepositions are used to a great extent in Greek, Latin, German, and almost entirely in the Romance languages and English. Ahrens calls the genitive, dative, and accusative, the three logical cases, and he justifies his use of this name by the relation in which this triad stands to the three chief classes of words, substantives, adjectives, and verbs.

‡ So in Pāli and Prākṛit *mayham dhītū* and *mama dhītū* both mean

The vocative is the oldest of all the cases, and was originally merely the stem itself used as an interjection: e. g. Skr. *s'iva* (masc.) is both the voc. and the stem, Gr. *πρέσβυ* is both the voc. and the stem which is found in *πρεσβυ-γενής*. Next to the vocative the accusative, called by Curtius the case with the *M-* suffix, was developed; the suffix probably only acted the part of an article, and was merely intended to call attention to the word to which it was attached. That the case with the *M-* suffix is older than the case with the *S-* suffix, (afterwards the nominative) appears firstly from the fact, that the nominative of the pronouns frequently ends in *m*, as Skr. *\*aham*, *tvam*, *ayam*, *iyam*, *idam*, Gr. *ἐγών*, Bœot. *τούν*, L. *idem*, and secondly from the very extended use of the accusative which is used in so many different relations, and which consequently must have existed for a long period by itself.\*

When the case with the *M-* suffix had been for some time in use, the want of a suffix, which should distinguish the *anymy daughter* where *mayham* = Skr. *mahyam* (dative), and *maṁma* = Skr. *mama* (genitive). In modern Greek also we find the genitive used for the dative, as in *σοῦ λέγω* (I say to thee); in Constantinople and Athens, however, where the best Modern Greek is spoken, *σέ λέγω* is used in this sense, while in printed books *σοι λέγω* is used.

\* Madvig, in his Latin Grammar (§ 222, Obs. 1, p. 197, Fourth English Edition), explains the connexion of the accusative with the infinitive, on the ground that the accusative, as the indefinite case, was naturally joined to the indefinite infinitive expression. "The accusative," he writes, "is originally the word without further definition or distinction. In the masculine and feminine a peculiar form, the nominative has been devised, in order to denote the word as a subject (or as the predicative noun), but in the neuter, the accusative is also nominative. The accusative, therefore (as an indefinite case), is used in the most simple way, in which a word is added, to define and complete the predicate expressed in the verb. In the indefinite infinitive expression, where the connexion between the subject and predicate is not of itself asserted, the subject and the predicative noun stand in the accusative, e. g. *hominem currere*, that a man runs; *esse dominum*, to be lord." The derivation of the nominative in the Romance languages from the Latin accusative, as Fr. *père* from L. *patrem*, It. *domino* from L. *dominum*, supports this view of the nature of the accusative.

mate from the inanimate, began to make itself felt, and the *S*-suffix was consequently introduced to satisfy the want. This *S* was used to mark both masculines and feminines, and was evidently derived from the pronominal root *sa* (he, she).

In the same period, during which the *M*- and *S*-suffixes were being developed, also arose the *D*-suffix to mark the neuter of the pronouns. The introduction of this latter suffix probably occurred between that of the *M*- and that of the *S*-suffix.

For a long period the Indo-European was content with the three cases noticed above, the Vocative, Accusative, and Nominative; but gradually there arose the necessity of new case-endings to express different ideas, and the remaining cases began to develop themselves. Among these the genitive singular appears to be the oldest; it originally ended in *-sya*, a suffix which is found in Gr. *δημό-σιος*, and which, perhaps, arose from an older *-tya*.<sup>\*</sup> This form was evidently of adjectival origin, and it is probable that adjectives in *-sya* were used to denote the notion afterwards expressed by the genitive in early times, even before the introduction of the *M*- and *S*-suffixes: in Greek we find one adjective in *-sya*, viz., *δημόσιος*, the stem of which *δημοσιο* is the original of the Epic genitive *δήμοιο*. The other genitive suffix *-as* is connected by Curtius† with the same pronominal root *sa* from which the nominative suffix *S* is derived, and consequently points back to an older *-asa*: the original form of I. E. gen. *vāk-as* (Skr. *vāk-as*, L. *voc-is*) was accordingly *vāk-asa*, just as the original form of I. E. nom. *svana-s* (L. *sonu-s*) was *svana-sa*. The compound *vāk-asa*, in Curtius' view, is therefore related to *svana-sa*, as a Tatpuruṣa compound in Sanskrit

<sup>\*</sup> This is the same pronominal root that appears in Skr. *sya-s* (he), *syā* (she), *tyat* (it). With this pronoun Bopp connects the Old High German and Anglo-Saxon article; see his Sanskrit Grammar, 3rd Ed. p. 176.

† Consult Curtius zur Chronologie, &c., p. 253.

(i. e. one in which the last word governs the preceding one, as *tatpurusha-s*, his man, where St. *tat* is used for gen. sing. *tasya*, *kumbha-kâra-s*, a maker of pots, from St. *kumbha*, a pot) is to a Karmadhâraya (i. e. a compound in which the first part is the predicate of the second part, as *nîla-utpalam*, the blue lotus, from St. *nîla*, blue), *vâk-a-sa* being thus equivalent to ὁ (τῆς) ὁπός and *svana-sa* to ὁ φθόγγος, the suffix in the first case governing the noun, and in the second, being only in apposition; and consequently *vâkasa svanasa* in conjunction would mean *the sound of the voice*, *vâkasa* being used in an adjectival sense, and literally meaning *vocal*. The two objections that can be brought against this view of the genitive are first, that the *a* which occurs before *sa* in *vâkasa* is left unaccounted for, and second, that, while the combination *vâkasa svanasa* (= vocis sonus) is quite comprehensible, *vâkasa svanama* (= vocis sonum) is not so, but that we should expect *vâkama svanama*. The first of these objections is of little importance, for *a* may be merely an adventitious element similar to *n*, that is inserted so frequently in Skr. gen. pl. as in *dêvâ-nâm*, *vadhû-nâm*, *mâtr-n-am*, &c., from the stems *dêva*, *vadhû*, *mâtr*, &c.; or to *i* that is inserted in the loc. pl. of Skr. *a*-stems, as in *s'ivêshu* = *s'iva-i-shu* from St. *s'iva*. The second objection is of more importance, and different methods of obviating it may be adopted: the simplest explanation seems to be that these adjectival forms in *-sya* and *-asa* are relics of that period when language had only arrived at the stage of *stems*, and that, when their true explanation had been lost, they became *genitives* after the introduction of the *M*- and *S*-suffixes, for before these latter suffixes were introduced, the conception of the genitive could not have been formed. Curtius compares this ancient genitive with the L. *cujus*, which is used not only as genitive, but also declined like an adjective, as *cujus puer*, *cuja puella*, *cujum pecus*.

In the present state of our knowledge, it appears impossible

to advance farther in the chronological arrangement of the cases.

### SANSKRIT CONSONANTAL STEMS.

§. 106. As the case-endings were originally the same for all stems, we properly cannot speak of different declensions, but only of different stems. We therefore, classifying stems according to their final sounds, divide them into *consonantal* and *vocalic*.\* The declension of stems, ending in *i*, *ī*, *u*, *ū*, or a diphthong, agrees in many respects with that of those ending in a consonant; this arises partly from the fact that the vowels *i* and *u* are closely related to the spirants *j* and *v*, and are easily interchanged with them. Consonantal stems in Sanskrit generally end in *n*, *t*, *s*, and *r*; the other consonants are found only in *root-stems* or those of *uncertain origin*.

§. 107. *Guttural Stems*.—These are found much more frequently in Greek and Latin than in Sanskrit. In Greek we find gutturals ending both *root-stems* and those of *uncertain origin*, as *φλογ*, *φρικ*, *ὄνυχ*, *κορακ*, &c.; and in Latin we find the mending not only *root-stems*, as *duc*, *reg*, *leg*, &c., but also formative suffixes, as *vor-ac*, *ed-ac*, *geni-tric*, *junic*, &c. In Sanskrit we have *sarvas'ak* (omnipotent, nom. sing. *sarvas'ak*,†

\* Grassmann (K. Z. xii. p. 241) divides Indo-European stems into those that end in a consonant or root-vowel and those that add a stem-vowel before the case-endings. The declension of the first class of stems he calls the *first declension*, and that of the second, the *second declension*.\*

† *Sarvas'ak* (nom. sing.) is for *sarvas'ak* + *s*, because two consonants are never allowed to end a word in Sanskrit, the last being always rejected, except when the one before the last is *r* (after which every consonant is kept, except *sh* (= *s* of desiderative forms) as *ūrkh*, nom. sing. of St. *ūrg'* (strong). The nom. sing. of St. *kitralikh* is *kitralik* for *k'itralikh* + *s*, final *s* being first rejected, and then *kh* becoming *k*, as in Sanskrit only *tenues* are allowed to end a word, aspirates and mediæ consequently having to pass into the corresponding *tenues*, in the guttural, cerebral, dental, and labial rows, as *kh*, *g*, *gh*, into *k*. No palatal can end a word; *k'*, *g'*, *g'h*, generally become *k*, and *k'h* becomes *t*.

from *sarva*, all, and *s'ak*, to be able), *suvalg* (going well, nom. sing. *suval'*, from *su*, well, and *valg*, to go), *k'itralikh* (a painter, nom. sing. *k'itralik*, from *k'itra*, a picture, and *likh*, to paint), *lih* (licking, nom. sing. *lit'*), *guh* (covering, nom. sing. *ghut'*), *upānah* (a shoe, nom. sing. *upānat*, from *upa* = Gr. ὑπό and *nah*, to bind), *duh* (milking, nom. sing. *dhuk*), *druh* (hating, nom. sing. *dhrut*, or *dhruk*), &c. No stem ends in *i*.

§. 108. *Palatal Stems*.—*Vāk* (voice, nom. sing. *vāk*), *ruk'* (light, nom. sing. *ruk*), *g'alamuk'* (a cloud, nom. sing. *g'alamuk*, from *g'ala*, water, and *muk'* to shed), *prāñk'* (the east, nom. sing. *prāñ*), *ruy'* (disease, nom. sing. *ruk*), *samrāg'* (a king, nom. sing. *samrāt*, from *sam* = Gr. σύν and *rāg'* to shine), *ūrg'* (might, nom. sing. *ūr*), *bhug'* (eating, nom. sing. *bhuk*), *khañg'* (lame, nom. sing. *khān*), *prāk'h* (asking, nom. sing. *prāt*, from *pra* = Gr. πρὸ and I. E. *ask*), *vis'* (a man, nom. sing. *vit*, E. *wight*), *dis'* (a region, nom. sing. *dik*), &c. There are no stems which end in *y* or *ñ*.

§. 109. *Cerebral Stems*.—*Dadhṛsh* (bold, nom. sing. *dadhrk*), *dvish* (hating, nom. sing. *dvit*), *mṛsh* (bearing, nom. sing. *mṛk*), *sugan* (a good reckoner, from *su*, well, and *gan*, to number, a denominative verb formed from *gaṇa*, a multitude, for *garna* from I. E. *gar*, to collect, whence Gr. ἀγείρω).

§. 110. *Dental Stems*.—*Marut* (the wind, nom. sing. *marut*), *g'agat* (the world, nom. sing. *g'agat*), *bharant* (= Gr. φε-ρουν, nom. sing. *bharan* = Gr. φέρων = L. *ferens*), &c., *suhṛd* (good-hearted, nom. sing. *suhṛt*, from *su* = Gr. εὖ and *hṛd* = E. *heart*), *pad* (a foot, nom. sing. *pāt*), *kravyād* (one who eats flesh, nom. sing. *kravyāt*, from *kravya*, raw flesh, Gr. κρέας, L. *caro*, E. *raw*, and *ad*, to eat, Gr. ἔδω, L. *edo*), *aranyasad* (living in forests, nom. sing. *aranyasat*, from *aranya*, a forest, and *sad*, to sit), *sad* (found in the dative *ā-sad-ē*, used as an infinitive, to place one's self), *agnimath* (fire-lighting, nom. sing. *agnimat*, from *agni*, fire, L. *ignis* and *math*, to agitate), *pañh* (a way), *s'is'rath* (found in the dative *s'is'rath-ē*, used as an infinitive, from *s'is'rath*, a reduplicated form of *s'rath*, to tie, to

loosen, with which Benfey connects Gr. κλώθω, κάλαθος, L. *crates, rete, restis*), *budh* (knowing; nom. sing. *bhūt*), *kshudh* (hunger, nom. sing. *kshut*), *yudh* (war, nom. sing. *yut*), *idh* (found in the accusative *sam-idh-am*, used as an infinitive, to set on fire), &c. Stems formed by the suffixes *-as*, *-is*, and *-us* are common, as *sumanas* (= Gr. εὐμενεις), *k'andramās* (the moon, nom. sing. *k'andramās*), *sug'yotis* (having good light, nom. sing. *sug'yotis*), *suk'akshus* (having good eyes, nom. sing. *suk'ashus*), &c. We also find stems ending in radical *s*, as *pindagras* (an eater of lumps, nom. sing. *pindagras*, from *pinda*, a lump, and *gras*, to eat), *śupis* (walking well, nom. sing. *su-pis* from *su*, well, and *pis* to walk), *śutus* (well sounding, nom. sing. *śutūs*), *lōs* (the fore-arm), &c. Stems ending in *n* are also common, as *s'van* (a dog, nom. sing. *s'vā*), *maghavan* (a name of Indra, nom. sing. *maghavā*, from *maghavant*, wealthy), *yuvan* (young, nom. sing. *yuvā*), *rāg'an* (a king, nom. sing. *rā'gā*), &c. Stems in *r* are also of frequent occurrence, as *gir* (voice, nom. sing. *gīr*), *dvār* (a door, nom. sing. *dvār*), *pur* (a town, nom. sing. *pūr*), *pitar* (father, nom. sing. *pitā*), *dātār* (giver, nom. sing. *dātā*), &c. No Sanskrit stem ends in *l*.

§. 111. *Labial Stems*.—*Ap* (water, only used in the plural, nom. pl. *āpas*, acc. pl. *apas*, instr. pl. *adbhis*),\* *gup* (guarding), *kakubh* (a summit or a region, nom. sing. *kakup*), *labh* (receiving, nom. sing. *lap*), *rabh* (found in the accusative *rabham*, used as an infinitive, to desire), *div* (heaven, nom. sing. *dyāus* from another stem *dyō*, acc. sing. *divam*), *pras'am* (mild, nom. sing. *pras'an* from *pra* = Gr. πρό and *s'am*, to cease, connected by Benfey with Gr. κάμ-νω), *kram* (found in the dative *ati-kram-ē*, used as an infinitive, to step over).

§. 112. *Unchangeable and Changeable Stems*.—Nouns with unchangeable stems have the same form before all the case-ter-

Bopp (Sanskrit Grammar, p. 135), illustrates the change of the labial media in this word into the dental media by the Dor. δδελός = εβελός.

minations, subject only to the influence of euphonic laws e. g. *marut* (the wind) belongs to this class, and remains unchanged.

|     | Sing.           | Dual.              | Plural.            |
|-----|-----------------|--------------------|--------------------|
| N.  | <i>marut</i>    | <i>marut-âu</i>    | <i>marut-as</i>    |
| A.  | <i>marut-am</i> | <i>marut-âu</i>    | <i>marut-as</i>    |
| I.  | <i>marut-â</i>  | <i>marud-bhyâm</i> | <i>marud-bhis</i>  |
| D.  | <i>marut-ê</i>  | <i>marud-bhyâm</i> | <i>marud-bhyas</i> |
| Ab. | <i>marut-as</i> | <i>marud-bhyâm</i> | <i>marud-bhyas</i> |
| G.  | <i>marut-as</i> | <i>marut-ôs</i>    | <i>marut-âm</i>    |
| L.  | <i>marut-i</i>  | <i>marut-ôs</i>    | <i>marut-su</i>    |
| V   | <i>marut</i>    | <i>marut-âu</i>    | <i>marut-as</i>    |

Nouns with changeable stems are divided into two classes ; the first class has two stems, the second has three.

The cases of the first class are divided into the *strong* (called by the Indian Grammarians the *Aṅga* cases) and the *weak* (called by the same grammarians the *Padu* and *Bha* cases). The *strong* cases in masculine and feminine† nouns are the nom. and voc. of the three numbers, and the nom. and acc. of the singular and dual, while in neuter nouns the nom. voc. and acc. pl. are the *strong* cases ; all the remaining cases are *weak*.

The cases of the second class of nouns are divided into *strong* (or *Aṅga*), *intermediate* (or *Padu*) and *weak* (or *Bha*). The *strong* stem is found in the same cases as in the nouns with only two stems ; the *intermediate* stem is found before all case-terminations beginning with consonants, and in the nom. and acc. sing. of neuter nouns.

The *strong* stem is evidently the oldest form, for it is found in the three oldest cases, nom. acc. and voc. (consult §, 105),

\* For the special euphonic laws of Sanskrit, consult Bopp's Sanskrit Grammar, pp. 36-68, or Max Müller's Sanskrit Grammar, pp. 9-59.

† Such feminine stems are very rare, and generally occur at the end of compounds, for the feminines of changeable stems are formed by adding *i* to the weak stem.

and in Greek and Latin the strong stems are preserved much more generally than in Sanskrit, as may be seen from a comparison of the declension of the present participle, e. g. Skr. *bharant* (bearing) = Gr. *φέρων* = L. *ferent*, the weak form of which stem is *bharat* :

|             | Skr.              | Gr.              | L.               |
|-------------|-------------------|------------------|------------------|
| Sing. N. V. | <i>bharāṇ</i>     | <i>φέρων</i>     | <i>ferens</i>    |
| A.          | <i>bharant-am</i> | <i>φέροντ-α</i>  | <i>ferent-em</i> |
| I.          | <i>bharat-ā</i>   | —                | —                |
| D.          | <i>bharat-ē</i>   | <i>φέροντ-ι</i>  | <i>ferent-i</i>  |
| Ab.         | <i>bharat-as</i>  | —                | <i>ferent-e</i>  |
| G.          | <i>bharat-as</i>  | <i>φέροντ-ος</i> | <i>ferent-is</i> |
| L.          | <i>bharat-ī</i>   | —                | —                |

These Greek and Latin forms at once indicate that the original form of the stem was the *strong* one.

The declension of the participle stem *bharant* (masc.) illustrates that of all stems with two bases ;

|                | Strong cases.     | Weak cases.         |
|----------------|-------------------|---------------------|
| Sing. N. V.    | <i>bharan</i>     |                     |
| A.             | <i>bharant-am</i> |                     |
| I.             | —                 | <i>bharat-ā</i>     |
| D.             | —                 | <i>bharat-ē</i>     |
| Ab. G.         | —                 | <i>bharat-as</i>    |
| L.             | —                 | <i>bharat-i</i>     |
| Dual. N. V. A. | <i>bharant-āu</i> |                     |
| I. D. Ab.      | —                 | <i>bharad-bhyām</i> |
| G. L.          | —                 | <i>bharat-ōs</i>    |
| Plural. N. V.  | <i>bharant-as</i> |                     |
| A.             | —                 | <i>bharat-as</i>    |
| I.             | —                 | <i>bharad-bhis</i>  |
| D. Ab.         | —                 | <i>bharad-bhyas</i> |
| G.             | —                 | <i>bharat-ām</i>    |
| L.             | —                 | <i>bharat-su</i>    |

*Nēuter.*

|         |          | Strong cases.    | Weak cases:     |
|---------|----------|------------------|-----------------|
| Sing.   | N. A. V. | —                | <i>bharat</i>   |
| Dual.   | N. A. V. | —                | <i>bharat-i</i> |
| Plural. | N. A. V. | <i>bharanti.</i> | —               |

- \* The feminines of these participle stems\* are formed by adding *i* to the weak stem, as *bharatī*, &c.

The declension of the participle of the præterite active illustrates that of stems with three bases; e. g. *rurudvāns* (having wept) is the *strong*, *rurudvas* the *intermediate* (the final *s* of which becomes *t* if it be either final or followed by terminations beginning with *s* and *bh*), and *rurudush* the *weak* base.

*Masculine.*

|                | Strong.             | Intermediate.         | Weak.               |
|----------------|---------------------|-----------------------|---------------------|
| Sing. N.       | <i>rurudvān</i>     | —                     | —                   |
| A.             | <i>rurudvāns-am</i> | —                     | —                   |
| I.             | —                   | —                     | <i>rurudush-i</i>   |
| D.             | —                   | —                     | <i>rurudush-e</i>   |
| Ab. G.         | —                   | —                     | <i>rurudush-as</i>  |
| L.             | —                   | —                     | <i>rurudush-i</i>   |
| V.             | <i>rurudvan</i>     | —                     | —                   |
| Dual. N. A. V. | <i>rurudvāns-āu</i> | —                     | —                   |
| I. D. Ab.      | —                   | <i>rurudvad-bhyām</i> | —                   |
| G. L.          | —                   | —                     | <i>rurudush-ōs</i>  |
| Plur. N. V.    | <i>rurudvāns-as</i> | —                     | —                   |
| A.             | —                   | —                     | <i>rurudush-as</i>  |
| I.             | —                   | <i>rurudvad-bhis</i>  | —                   |
| D. Ab.         | —                   | <i>rurudvad-bhyas</i> | —                   |
| G.             | —                   | —                     | <i>rurudush-ām*</i> |
| L.             | —                   | —                     | —                   |

\* For exceptions to this rule consult Max Müller's Sanskrit Grammar, p. 81.

*Neuter.*

|                | Strong.                                     | Intermediate.   | Weak.             |
|----------------|---|-----------------|-------------------|
| Sing. N. A. V. | —   | <i>rurudvat</i> | —                 |
|                | [The others are the same as the masculine.] |                 |                   |
| Dual. N. A. V. | —   | —               | <i>rurudush-i</i> |
|                | [The others are the same as the masculine.] |                 |                   |
| Plur. N. A. V. | <i>rurudvāns-i</i>                          | —               | —                 |
|                | [The others are the same as the masculine.] |                 |                   |

§. 113. The most important changeable stems in Sanskrit are the following :—

I. *Guttural*.—Compound stems, whose last element is *vāh* (bearing), retain *vāh* in the *strong* and *intermediate* cases, but reduce it to *ūh* in the *weak* cases ; e. g. from St. *vis'vavāh* (the supporter of the world) we have Sing. A. *vis'vavāh-am*, Pl. I. *vis'vavād-bhīs*, but Pl. A. *vis'vūh-as* : in a similar way are declined *sālivāh* (bearing rice), *bhāravāh* (bearing a burden). *S'vêtavāh* (a name of Indra, lit. drawn by white horses) differs from the preceding compounds of *vāh* in forming its *intermediate* cases from *svêtavas*, from which also the nom. and voc. sing. are formed, and in allowing the *weak* cases to be formed from either *s'vêtavāh* or *s'vêtūh*. The feminine stems of *vis'vavāh*, &c., are *vis'vaulī*, &c. *Anaduh* (an ox, lit. a waggōndrawer, from *anas*, a waggōn and *vāh*) forms the nom. and voc. sing. and the nom. acc. and voc. pl. neut. from *anadvāns* (the *ā* of which becomes *a* in voc. sing.) and the remaining strong cases from *anadvāh*, the intermediate from *anadut* and the weak from *anaduh*. *Ūpānah* (fem. a shoe) forms the nom. sing. and the intermediate cases from the stem *upānat*, as Sing. N. *upānat*, Dual. I. *upānadbhyām*, Pl. I. *upānadbhis*, and the remaining cases from *upānah* : these forms are explained by the fact that the original form of *nah* (to bind) was *nadh*, connected perhaps with Gr. *νήθω*.

II. *Palatal*.—Compounds of *añk'* (to go) have either two or three stems: e. g. *prāñk'* (directed forwards, eastern) and *avāñk'* (directed downwards, southern, from *ava*, down, and *añk'*) have each two stems, *prāñk'* and *avāñk'* for the strong, and *prāk'* and *avāk'* for the weak cases; *pratyañk'* (lying opposite, westward, from *prati* = Gr. *πρῶτι* and *añk'*), *udañk'* (directed upwards, northern, from *ut*, up, and *añk'*), &c., have each three stems, *pratyañk'*, *udañk'*, &c., for the strong, *pratyak'*, *udak'*, &c., for the intermediate, and *pratīk'*, *udīk'*, &c., for the weak cases. *Yūñg'* (binding) forms its strong cases from *yūñg'* and its weak from *yug'*.

III. *Cerebral*.—*Saḡush* (a companion from *sa*, with, and *g'ush*, to love) forms its strong and intermediate cases from *sag'us* (*u* also becoming *û*) and only its weak cases from *sag'ush*.

IV. *Dental*.—The present and future participle stems\* end in *ant* in the strong, and in *at* in the weak cases; see §. 112. for the declension of St. *bharant*, in a similar way to which are declined future participles, such as *dāsyant* = Gr. *δωσύντ*. The present participles of reduplicated verbs use the weak base throughout their whole declension, except in the Nom. Acc. and Voc. Pl. Neut., where either the strong or the weak stem may be used: e. g. *g'āgrat* (waking, from *g'āgar*, to wake) and *dadat* (giving from *dā*, to give) have as their acc. s. sing. *g'āgratam* and *dadutam* (= Gr. *διδόντα*). *G'agat* (neut. the world, lit. moving, an old present participle of *gam*, to go) is declined like *dadat* (neut.), except that it only has *g'aganti* as nom. pl. *Br̥hant* or *vr̥hant* (great) and *pr̥shant* (m. a deer and n. a drop of water) are declined like *bharant*; these words are however real participles, the first two being

\* Zend, as well as Greek and Latin, keeps the strong stem all through the declension of participles in *-ant*; in some words we find traces of the weak stem, as in Z. *bērēsant* (great) = Skr. *br̥hant*, the dat. of which is *bērēsaitē* and the gen. *bērēsātō* from the weak stem *bērēsāt*, while the acc. is *bērēsantēm* from the strong stem.

from *brh* or *vrh* (to increase)\* and the last, which is used in Vedic Sanskrit as an adjective, meaning *speckled*, being from *prsh* (to sprinkle). *Mahant* (gr<sup>e</sup>at)\* is also declined like *bharant*, except that the strong cases are formed from *mahânt*; this word is a participle of *mah* (to be great) = I. E. *magh*, whence Skr. *magha* (power). In Vedic we find other examples of *ant* becoming *ânt*, as in *mahânt*: e. g. Nom. Acc. and Voc. Pl. Neut. of the suffixes *mant* and *vant* and the present participle of *as* (to be); thus we have *pas'umânti* (abounding in cattle), *sânti* = Gr. *ὑῡρα*, &c. Stems in *vant* and *mant* are declined like *bharat*, except that the nom. sing. masc. ends in *vân* and *mân*, whereas the nom. sing. masc. of the participles ends in *an*, as nom. sing. *agnimân* (having fire), *ulanvân* (having water) in opposition to *bharan*. In Greek the vowel is lengthened in the participles, as Gr. *φέρων* = Skr. *bharan* = L. *ferens* = Z. *harans*. *Arvant*† (m. a horse) is declined like nouns in *-vant*, except that the nom. sing. is *arvâ*, as if from a stem *arvan*.\* *Kiyant* (now much), *iyant* (so much), *bhavant* (Your Honour) are declined like *ulanvant*. In Vedic we find that the vocatives of stems in *-vant* and *-mant* generally end in *-vas* and *-mas*, which point back to an older *-vat* and *-mat*.

*Pâd* (a foot) at the end of compounds keeps *pâd* in the strong and intermediate cases, but shortens it to *pad* in the

\* In Vedic we find *mahâm*\* (acc. sing.) for *mahântam*. Bopp compares to this rejection of *nt*, that of *vr* in the Greek participles *ρύψας*, *ισράς*, and he considers *μέγας* to be for *μεγαντε*, a similar participial form; he also accounts for the short *ă* in *μέγας* by supposing that its participial origin had been so long forgotten by the Greeks that they shortened the *a*.

† This stem comes from *ar* (to go) and *vant* (possessed of), the horse being so called from his speed: similarly Skr. *as'va-s* (a horse) = Gr. *ἵππος*, *ἵκκος*, L. *equus* is from the same root as Skr. *as'u-s* (swift) = Gr. *ὤρυς*, &c.; E. *horse* has also been connected with Skt. *k'ar* (to move), L. *curro*, though it seems better to connect it with Skr. *hrêsh* (to neigh), and to look upon it as an onomatopoeic word. L. *armentum* is perhaps connected with Skr. *arvant*.

weak cases. The participle in *-vāns*\* of the reduplicated preterite has three stems, as we have already seen from the declension of *rurudvāns* in §. 112. Comparative stems in *-iyāns* preserve these forms in the strong cases, but reduce them to *-iyāns* or *-yas* in the intermediate and weak cases; e. g. from *yavīyāns* (younger) we have nom. sing. *yavīyān*, acc. pl. *yavīyāsas*, instr. pl. *yavīyōbbhis*, &c. The termination of the nom. sing. is *-iyān* = Gr. *ἰων* = L. *iōr* (the *o* of which is only shortened when *r* is final = O. L. *-iōs*), all of which forms point back to *-iyāns* as the termination of the nom. sing. in Indo-European. The feminines of participles in *-vāns* and comparatives in *iyāns* are formed by adding *i* to the weak base, as *rurudushi*, *yavīyasi*. *Pumāns*† (a man) forms the strong cases from *pu-māns*, the intermediate from *pum* and the weak from *pūns*.

\* This suffix = I. E. *vant* which meant *having, provided with, &c.* Its use to express the idea of the perfect tense is similar to that of the auxiliary verb *have* in English: *udāvant* (having water, the ocean) is a perfectly similar form to *rurudvant* (having roared). We find *-vant* in Gr. **Φεντ** (nom. sing. masc. -**Φεις**, fem. -**Φεσσα** = -**Φεντγα**, neut. -**Φεν**), as **νιφο-Φεντ**, &c., and in Lat. *-osus* = *-onsus* = *-vant-a-s*, as *formōsus* for *formonsus*, &c. Similarly we find *-vant* in perf. part. in Gr. as **λελοιπ-ώς** = **λελοιπ-Φοτ-ς** (m.) **λελοιπ-υία** = **λελοιπ-υογα** = **λελοιπ-Φαντγα** (f.) **λελοιπ-ός** = **λελοιπ-Φοτ** (n.): the only case of *-vant* being used to express the perfect in the Italic languages is the very doubtful one of the Oscan perfect; e. g. *prūfatted*, 3. sing. perf. (probavit), *prūfattens*, 3. pl. perf. (probaverunt) are supposed to be for *prūfat-fed*, *prūfat-fens*, where *fed* and *fens* come from root *fu* (to be) and *prūfat* is supposed to be the participle pret. and = *profa-vot*, *vot* being = Gr. **Φοτ**. Consult Schleicher's Compendium, p. 834.

† *Pumāns* is derived by Benfey from *api* (= Gr. *ἄπι*, L. *ob*)\* and *man* (to think) + *t*. This is a very unlikely account of the word. It is much more probable that it is derived from an old root *pu* (with the suffix *-mant*) whence come Skr. *pu-tra-s* (a son), *pō-ta-s* (the young of any animal). *Pu* meant *to grow*, and from it arose in Sanskrit the secondary verb *push* (to nourish). This root perhaps is the origin of a very numerous class of words in Greek and Latin, as Gr. **παίς** (for **παΦ-ιδς**) for which **παῦς** and **πῶς** are found on inscriptions, **πῶλος** (for **ποΦ-λος**), **ποι-έω**, **πό-α**, **πο-ία**; L. *pu-er*, *pa-pav-er*, *po-mum* (for *pov-mum*), *præ-pu-tium*, &c.

Stems in *-an*, *-man*, *-van*,\* form their strong cases from *-ân*, *-mân*, *-vân*, their intermediate form *-a*, *-ma*, *-va*, and their weak form *-n*, *-mn*, *-vn* : e. g. *râg'ân* (m. a king) and *nâman* (n. a name) are thus declined :

[St. *râg'ân*].

|     | Sing.            | Dual.              | Pl.                |
|-----|------------------|--------------------|--------------------|
| N.  | <i>râg'â</i>     | <i>râg'ân-âu</i>   | <i>râgân-as</i>    |
| A.  | <i>râg'ân-an</i> | <i>râg'ân-âu</i>   | <i>râg'n-as</i>    |
| I.  | <i>râg'n-â</i>   | <i>râg'a-bhyâm</i> | <i>râg'a-bhis</i>  |
| D.  | <i>râg'n-ê</i>   | <i>râg'a-bhyâm</i> | <i>râg'a-bhyas</i> |
| Ab. | <i>râg'n-as</i>  | <i>râg'a-bhyâm</i> | <i>râg'a-bhyas</i> |
| G.  | <i>râg'n-as</i>  | <i>râg'n-os</i>    | <i>râg'n-âm</i>    |
| L.  | <i>râg'n-i</i>   | <i>râg'n-os</i>    | <i>râg'a-su</i>    |
| V.  | <i>râg'an</i>    | <i>râg'ân-âu</i>   | <i>râg'ân-as</i>   |

[St. *nâman*].

|          |                |                   |                   |
|----------|----------------|-------------------|-------------------|
| N. A. V. | <i>nâma</i>    | <i>nâmn-i</i>     | <i>nâmân-i</i>    |
| I.       | <i>nâmn-â</i>  | <i>nâma-bhyâm</i> | <i>nâma-bhis</i>  |
| D.       | <i>nâmn-ê</i>  | <i>nâma-bhyâm</i> | <i>nâma-bhyas</i> |
| Ab.      | <i>nâmn-as</i> | <i>nâma-bhyâm</i> | <i>nâma-bhyas</i> |
| G.       | <i>nâmn-as</i> | <i>nâmn-ôs</i>    | <i>nâmn-âm</i>    |
| L.       | <i>nâmn-i</i>  | <i>nâmn-ôs</i>    | <i>nâma-su</i>    |

The locative sing. of these nouns may also be *râg'ani* and *nâmani*; the voc. sing. of *nâman* may also be *nâman* and its nom. acc. and voc. dual also *nâmanî*.

The feminines† of *râg'ân* and similar stems are generally formed by adding *î* to the weak stem, as *râg'nî* (a queen). Nouns in *-vân* form their feminines in *-varî*, as *pivân* (m. fat) = Gr. *πίων*, *pivari* (f.) = Gr. *πίερα*, *Πιερία*, &c. Feminine stems in *-an*, such as *dâmân* (f. a rope) are declined like *râg'ân*.

\* For special peculiarities in the declension of these stems consult Bopp's Sanskrit Grammar, p. 129, seq., or Max Müller's Sanskrit Grammar, p. 85, seq.

† For special rules see Max Müller's Sanskrit Grammar, p. 87, seq.

*S'van* (m. a dog), *yuvān* (m. young), and *maghavan* (m. a name of Indra, lit. mighty) form their strong cases from *s'ván* *yuvān*, *maghavān*; their intermediate from *s'va*, *yuva*, *maghava*; and their weak from *s'un*, *yūn*, *maghōn*.

For other examples of changeable stems in *-n* Bopp's Sanskrit Grammar (pp. 130-134) may be consulted.

Stems in *-tar* and *-tār* form their strong cases from *-tar* and *-tār*, and the remainder from *-tr* and *-tṛ*: e. g. *dātār* (m. a giver), *pitar* (m. father), *mātar* (f. mother) are thus declined.

### Singular.

|          |                 |                 |                 |
|----------|-----------------|-----------------|-----------------|
| N.       | <i>dātā</i>     | <i>pitā</i>     | <i>mâtā</i>     |
| A.       | <i>dâtār-am</i> | <i>pitar-am</i> | <i>mātar-am</i> |
| I.       | <i>dâtr-ā</i>   | <i>pitṛ-ā</i>   | <i>mâtr-ā</i>   |
| D.       | <i>dâtr-ē</i>   | <i>pitṛ-ē</i>   | <i>mâtr-ē</i>   |
| * Ab. G. | <i>dâtur</i>    | <i>pitur</i>    | <i>mâtur</i>    |
| L.       | <i>dâtār-i</i>  | <i>pitar-i</i>  | <i>mātar-i</i>  |
| V.       | <i>dātar</i>    | <i>pitar</i>    | <i>mātar</i>    |

### Dual.

|           |                   |                   |                   |
|-----------|-------------------|-------------------|-------------------|
| N. A. V.  | <i>dâtār-āu</i>   | <i>pitar-āu</i>   | <i>mātar-āu</i>   |
| I. D. Ab. | <i>dâtr-bhyām</i> | <i>pitṛ-bhyām</i> | <i>mâtr-bhyām</i> |
| G. L.     | <i>dâtr-ōs</i>    | <i>pitṛ-ōs</i>    | <i>mâtr-ōs</i>    |

### Plural.

|        |                   |                   |                   |
|--------|-------------------|-------------------|-------------------|
| N. V.  | <i>dâtār-as</i>   | <i>pitar-as</i>   | <i>mātar-as</i>   |
| A.     | <i>dâtṛ-n</i>     | <i>pitṛ-n</i>     | <i>mâtṛ-s</i>     |
| I.     | <i>dâtr-bhis</i>  | <i>pitṛ-bhis</i>  | <i>mâtr-bhis</i>  |
| D. Ab. | <i>dâtr-bhyas</i> | <i>pitṛ-bhyas</i> | <i>mâtr-bhyas</i> |
| G.     | <i>dâtṛ-nām</i>   | <i>pitṛ-nām</i>   | <i>mâtṛ-nām</i>   |
| L.     | <i>dâtr-shu</i>   | <i>pitṛ-shu</i>   | <i>mâtṛ-shu</i>   |

The locatives *pitari* and *mâtari* are treated as strong cases, while the corresponding Greek datives *πατρί* and *μητρί* have become weak.

Bopp considers that the term. of the abl. and gen. sing. *-ur* is for *-urs*, and that this is derived by metathesis from *-rus*, which represents an older *-ras*: *pitr-as* would be exactly = Gr. *πατρός*. This view is supported by Zend, in which we find *dâthrô* (gen. sing.), which has arisen from *dâthras*.

V. *Labial*.—*Âp* (f. water), only used in the plural, forms its strong cases from *âp*, and its weak from *ap*, which becomes *ad* when followed by *bh*. *Div* (f. sky) forms its nom. and voc. sing. from *dyô*, its intermediate cases from *dyu*, and all the rest from *div*.

§. 114. The division of cases into strong and weak manifests itself remarkably in the accentuation of monosyllabic nouns, of which the strong cases retain the accent on the stem, while the weak have it on the case-ending. In this law of accentuation Greek in general agrees with Sanskrit, and it has consequently been inferred by Bopp that the division of the cases into the strong and the weak had already partially begun in Indo-European times. As far as the accentuation is concerned, the accusative plural ranks as a strong case: this fact points back to the time when the acc. pl. was in every respect strong, as it must have been in early times on account of its being older than all the other cases (except the vocative). In the Veda we also find traces of its having been strong, as in the acc. pl. *pitâras* (= Gr. *πατέρας*) for which in later Sanskrit we find *pitṛn*. The declension of the Sanskrit stems *nâu* and *vâk'*, as compared with that of the Greek stems *vau* and *ὄπ*, illustrates the agreement of Sanskrit and Greek in the accentuation of the cases:

*Singular.*

|             |               |             |                |             |
|-------------|---------------|-------------|----------------|-------------|
| N. V.       | <i>ná'us</i>  | <i>vaũç</i> | <i>vá'k</i>    | <i>ὄψ</i>   |
| A.          | <i>ná'vam</i> | <i>vñā</i>  | <i>vá'k'am</i> | <i>ὄπα</i>  |
| I.          | <i>nāvā'</i>  | —           | <i>vák'á'</i>  | —           |
| D.          | <i>nāvē'</i>  | —           | <i>vák'ē'</i>  | —           |
| Ab.         | <i>nāvás</i>  | —           | <i>vák'á's</i> | —           |
| G.          | <i>nāvás</i>  | <i>vāóç</i> | <i>vák'á's</i> | <i>ὀπόç</i> |
| L. (Gr. D.) | <i>nāvl *</i> | <i>vāí</i>  | <i>vák'í</i>   | <i>ὀπί</i>  |

*Dual.*

|                              |                  |              |                  |              |
|------------------------------|------------------|--------------|------------------|--------------|
| N. A. V.                     | <i>nā'vāu</i>    | <i>vāē *</i> | <i>vá'k'āu</i>   | <i>ὄπε *</i> |
| I. D. Ab. }<br>(Gr. G. D.) } | <i>nāubhyā'm</i> | <i>vaoĩv</i> | <i>vāgbhyā'm</i> | <i>ὀποĩv</i> |
| G. L.                        | <i>nāvō's</i>    | —            | <i>vák'ō's</i>   | —            |

*Plural.*

|             |                 |              |                 |             |
|-------------|-----------------|--------------|-----------------|-------------|
| N. V.       | <i>nā'vas</i>   | <i>vāēç</i>  | <i>vā'k'as</i>  | <i>ὄπεç</i> |
| A.          | <i>nā'vas</i>   | <i>vāas</i>  | <i>vá'k'as</i>  | <i>ὄπας</i> |
| I.          | <i>nāubhís</i>  | —            | <i>vāgbhís</i>  | —           |
| D. Ab.      | <i>nāubhyás</i> | —            | <i>vāgbhyás</i> | —           |
| G.          | <i>nāvā'm</i>   | <i>vaōv</i>  | <i>vák'ā'm</i>  | <i>ὀπōv</i> |
| L. (Gr. D.) | <i>nāushú</i>   | <i>vavsí</i> | <i>vákshú</i>   | <i>ὀψί</i>  |

In the declension of *vaũç* given above I have used generally the Doric forms as being nearer to the Sanskrit, on account of their having kept the original *ā*, except\* in the acc. sing., where the Ionic *vñā* is nearer to *ná'vam* than the Doric *vaũv* or *vāv*.

There are some exceptions to the foregoing law of accentuation in Sanskrit: e. g. *gó* (m. f. an ox, cow), *s'van* (m. a dog), *kruñk'* (m. a plover) always keep the accent on the stem-syllable. The same is the case with *rág'* (m. a king), *krí* (making), and roots in *ā*, such as *dhmā* (to blow), when occurring at the end of compounds, except in the vocative, where the accent is thrown as far back as possible, as in *sáñkhadh-*

*mās*, voc. sing. of St. *s'añkhadhṃā* (m. a shell-blower). In the Greek stems *βου* and *κυν*, corresponding to Skr. *gō* and *śvan*, the accent, however, follows the general rule: thus we have *κυνί* = *s'únē*, *κυνός* = *s'únas*, *κυνοῖν* = *s'vábhyaṃ*, *κυνῶν* = *s'únām*, *κυσί* = *s'vásu*, *βοί* = *gávi*, *βοοῖν* = *gōbhyaṃ*, *βοῶν* = *gávām*, *βουσί* = *gōshu*. In *div* (f. heaven) the accent is kept on the stem in the intermediate cases, as in the instr. pl. *dyúbhis*; in the intermediate cases of *nar* (m. a man), the accent may fall either on the stem or on the case-ending, as in dat. pl. *nr'bhyas* or *nr̥bhyás*. In the Greek *άνήρ*, corresponding to Skr. *nar*, the accent is kept on the *ε* whenever it appears as in *άνέρι*, *άνέρα*, *άνέρων*, but in the weak cases, when the *ε* is lost, the case ending is accented as in Sanskrit; thus we have Gr. *άνδρι* = Skr. *narí*, &c.

The following Sanskrit monosyllabic stems accentuate the case-ending of the accusative plural, like those of the other weak cases: *ap* (f. water), *dat* (m. tooth), *div* (f. heaven), *nas* (f. nose), *nis'* (f. night), *pad* (m. foot), *puns* (m. man), *mās* (m. month), *path* (m. path), *math* (m. churning-stick), *rái* (f. riches), and *úh* (for *váh* at the end of compounds), *suhṛd* (m. friend), and other compounds of *hṛd* (n. heart). The Greek presents an older form than the Sanskrit in *πόδας* = Skr. *padās*, while in the other cases the accentuation is the same, as in *ποδί* = *padí*, *ποδός* = *padás*, *ποδῶν* = *padām*, *ποσσί* = *patsí*.

It has been already remarked that the opinion is maintained that the distinction between the strong and weak cases in monosyllabic stems had already begun in Indo-European times. Now, if such a distinction had then manifested itself, and if it had begun in a difference of accentuation, it would be quite natural to expect that the Greek stems *βου* and *κυν* should be accented in the same way as the Skr. stems *gō* and *śvan*, but this, as we have seen, is not the case; for in Sanskrit these stems are accented throughout their whole declension, whereas in the Greek corresponding stems the accent is placed

on the case-endings of the weak cases. It is then safer to suppose that, when the Greek and Sanskrit separated from each other, there was no distinction (as far as monosyllabic stems were concerned) between the accentuation of the strong and that of the weak cases, and consequently, as we shall see, only one form of the stem (i. e. the strong one) existed. It is, however, evident that certain latent tendencies already existed in Indo-European, which afterwards bore similar fruits in Sanskrit and Greek.

Before the first separation of any Indo-European language from the parent stock, the only law of accentuation that existed was this, that the root-syllable should always have the accent. Consequently in the declension of monosyllabic stems the accent always fell upon the stem, which preserved the strong form in every case. In process of time, but not till after the first separation that occurred in the Indo-European, the accent began to move towards the termination, and consequently, as generally happens to unaccented syllables, the stem became shortened in form. The initial consonants\* (*bh* and *s*) of the intermediate case-endings preserved the accent on the stem in these cases for a longer period than it remained on the stem in the weak cases, and consequently these cases frequently preserve a stronger form of the stem than is found in the weak cases. The accentuation of the intermediate cases of *div* (e. g. instr. pl. *dyúbhis*, &c.) is a relic of the

\* Oxytone stems of the part. pres. active allow the accent to fall on the case-ending in the weak cases, while in the intermediate cases the accent is kept where it originally was, as the consonantal combinations *dbh* and *ts* prevent it passing over them: thus from St. *tudánt* (striking) we have instr. pl. *tudádbhis*, loc. pl. *tudátsi* beside instr. sing. *tudatá*, &c. Similarly the consonantal conjunction *nt* prevents the accent moving on to the final syllable in nom. and acc. dual neuter *tudánti*, whereas in the side form of the same cases *tudati* the accent advances. In participles such as *bhárant* (bearing) the accent remains on the root syllable throughout the whole declension.

time when the accent in these cases still remained on the stem; while that of *nṛbhyas* or *nṛbhyás* (dat. pl. of *nar*) points to the time when the accent in the same cases was moving on from the stem to the case-ending. The monosyllabic pronouns and the numeral *two* also retain the accent on the stem in Sanskrit in the weak cases: thus we have *tē'shu* = Gr. *τοῖσι* *tā'su* = Gr. *ταῖσι*, *yē'shu* = Gr. *οἷσι*, *māhyam* = L. *mīhi*, *túbhyam* = L. *tibi*, *māma* (gen. sing. of *ahám*, I), *dvābhyām* = Gr. *δυσιν*, which latter has become weak beside the nom. *δύο*, which is still strong.

### SANSKRIT VOCALIC STEMS.

§. 115. Stems ending in *a* (m. and n.) and *ā* (f.) are very numerous; e. g. *s'iva* [which as an adjective means *prosperous*, while as a noun *S'iva* (m.) is the god *Sivā*, *s'ivā* (f.) *his wife*, and *s'ivam* (n.) *happiness*] is thus declined:

#### Singular.

|     | Masc. *         | Fem.            | Neut.           |
|-----|-----------------|-----------------|-----------------|
| N.  | <i>s'iras</i>   | <i>s'ivā</i>    | <i>s'ivam</i>   |
| A.  | <i>s'iram</i>   | <i>s'ivām</i>   | <i>s'iram</i>   |
| I.  | <i>s'ivēna</i>  | <i>sivayā</i>   | <i>s'ivēna</i>  |
| D.  | <i>s'ivāya</i>  | <i>s'ivāyāi</i> | <i>s'ivāya</i>  |
| Ab. | <i>s'ivāt</i>   | <i>s'ivāyās</i> | <i>s'ivāt</i>   |
| G.  | <i>s'ivasya</i> | <i>s'ivāyās</i> | <i>s'ivasya</i> |
| L.  | <i>s'ivē</i>    | <i>s'ivāyām</i> | <i>sivē</i>     |
| V.  | <i>s'iva</i>    | <i>s'ivē</i>    | <i>s'iva</i>    |

#### Dual.

|           | Masc.             | * Fem.            | Neut.             |
|-----------|-------------------|-------------------|-------------------|
| N. A. V.  | <i>s'ivāu</i>     | <i>s'ivē</i>      | <i>s'ivē</i>      |
| I. D. Ab. | <i>s'ivābhyām</i> | <i>s'ivābhyam</i> | <i>s'ivābhyām</i> |
| G. L.     | <i>s'ivayós</i> * | <i>s'ivayós</i>   | <i>s'ivayós</i>   |

## Plural.

|        | Masc.             | Fem.              | Neut.             |
|--------|-------------------|-------------------|-------------------|
| N. V.  | <i>s'ivās</i>     | * <i>s'ivās</i>   | <i>s'ivāni</i>    |
| A.     | <i>s'ivān</i> *   | <i>s'ivās</i>     | <i>s'ivāni</i> *  |
| I.     | <i>s'ivāis</i>    | <i>s'ivābhis</i>  | <i>s'ivāis</i>    |
| D. Ab. | <i>s'ivēbhyas</i> | <i>s'ivābhyas</i> | <i>s'ivēbhyas</i> |
| G.     | <i>s'ivānām</i>   | <i>s'ivānām</i>   | <i>s'ivānām</i>   |
| L.     | <i>s'ivēshu</i>   | <i>s'ivāsu</i>    | <i>s'ivēshu</i> . |

The declension of these stems corresponds to that of *malus*, *mala*, *malum* in Latin, and *ἀγαθός*, *ἀγαθή*, *ἀγαθόν* in Greek.

Stems ending in *ā*, both masculine and feminine, are derived from verbal roots ending in *ā*, as *s'añkhadhmā* (m. f. a shell-blower), from *s'añkha* (a shell, Gr. *κόγχη*) and *dhmā* (to blow). The strong and intermediate cases of this stem are formed from *s'añkhadhmā*, and the weak from *s'añkhadhm*. The neuter stem is *s'añkhadhma*, which is declined as *s'iva* (n.).

§. 116. Stems in *i*, *ī*, *u*, *ū*. We find masc. fem. and neut. stems in *i* and *u*; e. g. *kavi* (m. poet), *gati* (f. motion), *vāri* (n. water), &c.; *bhānu* (m. the sun), *dhēnu* (f. a milch-cow), *tālu* (n. the palate), &c. We find stems in *ī* and *ū*, both masc. and fem., derived from verbal roots such as *krī* (to buy), *lū* (to cut), &c.; these stems are of course monosyllabic. We find other polysyllabic stems in *ī* and *ū*, also masc., such as *papī* (m. the sun), *nṛtū* (m. a dancer), &c. In general stems in *ī* and *ū* are feminine, such as *bhī* (f. fear), *bhū* (f. earth), *radhū* (f. a wife), &c.

§. 117. The chief diphthongal stems are *rāi* (m. f. wealth, L. *res*), *gō* (m. an ox, f. a cow), *dyō* (f. heaven), *nāu* (f. a ship), *glāu* (m. the moon).\*

\* For the special rules respecting all Sanskrit Vocalic stems consult Max Müller's "Sanskrit Grammar," pp. 96-115, and Bopp's "Sanskrit Grammar." nn. 109. *see*.

## GREEK CONSONANTAL STEMS.

## §. 118. GUTTURAL STEMS.

The nom. sing. of these stems ends in ξ\*.

I. *Stems ending in κ*: κοῤῥᾱκ (m. a crow), δρᾱκ (f. the hand, connected with δράσσομαι, δραχμή, δράγμα, δάρκ-ες, meaning *bundles* according to Hesychius), θωρᾱκ (m. a corslet), βλᾱκ (weak, connected with μαλακός), ἄλωπεκ (f. nom. sing. ἄλώπηξ, where ε irregularly becomes η; this word is perhaps derived from ἄλωπος which meant *craft*, Hesych.), σφηκ (m., derived from Curtius from the same root as L. *vespa*, by the addition of the individualizing suffix κ, which is found in ἱέραξ beside ἱερός, μύρμηξ = μύρμος, an ant, ἄλωπηξ beside ἄλωπος, &c.; the stages through which the original *vaspa* passed were accordingly *Ἔεσπα*, *Ἔεσπακ*, *σπᾱκ*, Ion. *σπηκ*, *σφηκ*, as π is aspirated through the influence of σ), χοινῖκ (f.), φοινῖκ (m. and f. nom. sing. φοῖνιξ, where the ι is irregularly shortened as in κῆρυξ from St. κηρῦκ), γυναικ\* (f. nom. sin. γυνή, voc. γύναι; this noun is also declined as an α-stem, as acc. sing. γυνήν acc. pl. γυνάς, &c.), &c. These κ-stems are very common in Greek, and are either root-stems such as πᾱκ (f. acc. sing. πτάκα, a hare, found in Aesch. Ag. 135) from R. πᾱκ, whence ἔ-πτακον, πτήσσο = πτηκ-γω, πτώξ, or stems of uncertain origin such as κοῤῥᾱκ, νεᾱκ (m. a young man), &c. The κ of these latter stems may however have arisen from an older κο = I. *Ḳ*. *ka*, a very common suffix; thus μαλακός became μαλακς, and then *μλαξ*, and finally βλάξ, as βροτός from μροτος. Many κ-stems exist side by side with ones in κο or κη: thus οἶκ in

\* *Γυναικ* is accented in the oblique cases like monosyllabic stems, such as *ὄπι*, see §. 114; thus as the strong cases we have γυναικα, γυναικε, γυναικες, γυναικας; and as the weak, γυναικός, γυναικί, γυναικοῖν, &c.: γυναικ may either be for γυναικι = I. E. *ganaki*, the fem. of *ganaka*, whence Skr. *g'anaka* (a father); and as the accent generally is placed on the fem. termination -ι, it may be kept here on it, although transposed, or else it may be derived from γυναι + R. *ικ* (to be like), and declined as a root-stem. This latter derivation is improbable, as the R. *ικ* was originally *Ḳικ*.

οἶκ-α-δε beside οἶκο, ἄλκ in ἄλκῃ for ἄλκῃ from ἄλκή, ἰωκ in ἰώκα for ἰωκὴν from ἰωκή, κρόκ-α for κρόκην from κρόκη, λάκ-ας (φάραγγας, Hesych.) beside λάκκο-ς (m. a lake). Moreover in the dialects we find a similar connexion between the κ- and the κο- stems: thus we have Ion. φύλακο-ς = φύλαξ, Ion. φρίκη = φρίζ, Æol. ἰέρακο-ς = ἰέραξ, γλαῦκο-ς = γλαῦξ, αὔλακο-ς = αὔλαξ.

II. *Stems ending in γ*: ἄρπαγ, ῥᾱγ (f. a berry), μαστίγ (f. a whip; Homer uses μαστι as the stem whence dat. μάστι, acc. μάστιν), φλόγ (f. from R. φλεγ = Skr. *bhṛág*, to shine), διζύγ (m. f. having two yokes), Σφιγγ (f. the Sphinx, lit. the strangler: this stem becomes Φικ in Bæotic, nom. sing. Φίξ), αἰγ (m. f. for ἀγι = I. E. *agí*, a she-goat, beside Skr. *ag'a-s*, a he-goat, from R. *ag* = Skr. *ag'*, to move, when Gr. ἄγ-ω, L. *ago*), &c. &c.\* There appears to be some connexion between the γ- stems and those in -γο and -γη, but not so close as the connexion between the κ- stems and those in -κο and -κη; thus we find φυγ in φύγ-α-δε beside φυγή, ἄρπαξ (f. = ἄρπαγή in Hesiod), Æol. ἄρπαγος = ἄρπαξ, αἰγο- (= αἰγ) found in Bæot. ἡγυς, i. e. αἰγοῖς for αἰξί.

III. *Stems ending in χ*: βηχ (f. a cough), τριχ (f. nom. sing. θρίξ), ὀρνιχ (m. f. Doric for ὀρνιθ, beside which in Pin-dar we find stem ὀρνι), στιχ (f. a row), πτυχ (f. a fold), ὄνυχ (m. a nail), &c.† There appears also to be some connexion between these stems and those in -χο and -χ; thus we have πτύξ beside πτυχή, στιξ beside στιχο-ς, ἀγχοῦ (the gen. of an old χο-stem) beside ἄγχ-ι (the loc. of an old χ-stem); ὄνυχ is probably derived from an older ὄνυχο = I. E. *nagha*, whence Skr. *nakha-s* (m. a nail), L. *ungui-s*, Lith. *naga-s* (id.).

\* Πύξ (with the fists) may be a shortened dat. pl. from a stem πυγ, connected with πυγ-ών (an ell), πυγ-μή (the fist), L. *pug-nus*, *pug-il*, &c. Consult Curtius, Grundzüge, &c., p. 258.

† Πλιξ (f. βῆμα), appears to be from the stem πλιχ; compare πλιχ-άς (interfeminium). Ἀγχ-ι may be the loc. of an old stem αγχ, connected with ἀγχω, ἀχος, L. *angustus*, *anxius*, &c.

## §. 119. DENTAL STEMS.

I. *Stems ending in τ*: γαλακτ (n. nom. sing. γάλα), νυκτ (f. nom. sing. νύξ), μελιτ (n. nom. sing. μέλι), τερατ (n. nom. sing. τέρας), δαιτ (f. nom. sing. δαίς), κερᾶτ\* (n. horn, nom. sing. κέρας, dat. pl. κέρασι, but κέρατος, κέρατι, &c.), κρεατ (n. meat, nom. sing. κρέας), χρωτ (m. nom. sing. χρώς), ἔρωτ (m.), χαριτ† (f. nom. sing. χάρις), ὀνείρατ (n. found in gen. sing. ὀνείρατ-ος, nom. pl. ὀνείρατ-α beside nom. sing. ὄνειρο-ς, m. a dream), προσωπατ (n. found in dat. pl. προσώπα-σι beside πρόσωπο-ν, n.), γονFar (n. the knee, nom. sing. γόνυ, gen. sing. γούνατος and γόνατος = γονFarτος, &c. : γόνυ is also declined as an *υ*-stem, from which the former stem γονFar has been derived by means of the individualizing suffix ατ, thus, gen. sing. γούνος = γονυος, acc. pl. γούνα = γοννα), δορFar (n. a spear, nom. sing. δόρυ, gen. sing. δούρατος and δόρατος = δορFarτος, &c., δόρυ is also declined as an *υ*-stem, thus gen. sing. δουρός = δορυος, &c., and as a *ρ*-stem, thus gen. sing. δορ-ός, dat. sing. δορ-ί, and perhaps as a *σ*-stem, thus dat. sing. δόρει = δορεσ-ι, acc. pl. δόρη = δορεα = δορεσ-α), ὦτ (n. the ear, Ion. οὔατ, nom. sing. οὔς,† Ion. οὔας, gen. sing. ὦτ-ός, Ion. οὔατ-ος : Curtius supposes that the ori-

\* The stems κερᾶτ, κρεατ, χρωτ, ἰδρωτ, γελωτ, &c., appear to have side forms ending in *ς*: thus κέρως (gen. sing. of κέρας) = κερασ = κερασ-ος, κέρα (dat. sing.) = κεραῖ = κερασ-ι, χροῖ (dat. sing. of χρώς) = χροσ-ι, γίλω (acc. sing. of γίλως) = γελοα = γελοσ-α, &c. Beside κρωτ we find the stem κρο, whence comes acc. sing. ἔρον.

† Beside such stems as χαριτ and other dental stems ending in -ιδ, -ιθ, -υδ, -υθ, which are *not* oxytone in the nom. sing., other stems are found ending in -ι and -ν; thus we find χάριτ-α = χάρι-ν, ἔριδ-α = ἔρι-ν, Θέτιδ-ος = Θέτι-ος, &c. : in the case of oxytone stems no such side forms exist, and we only find such forms as ἱλπιδ-α, χλαμύδ-α, λαμπάδ-α, &c.

‡ Οὔς may be connected with Skr. *av* (to desire), Gr. *á-tw* (I hear), *á-ερε* (ἀκούει, Hesych.), L. *av-eo*, *au-dio*, &c. The suffix ατ appears also in stem ἀλατ (salt), whence dat. pl. ἀλασιν.

ginal form of  $\acute{\omega}\tau$  was  $\alpha\upsilon\sigma\text{-}\alpha\tau$ ,  $\alpha\tau$  being the same suffix that appears in  $\delta\acute{o}\rho\upsilon\text{-}\alpha\tau$  and  $\gamma\omicron\nu\nu\text{-}\alpha\tau$ , and he connects with it L. *aur-is* for *aus-is*, cf. *aus-culto*, Goth. *aus-o*, the ear, Lith. *aus-is*, id.);  $\delta\epsilon\sigma\mu\alpha\tau^*$  (n. bonds, nom. pl.  $\delta\acute{\epsilon}\sigma\mu\alpha\tau\text{-}\alpha$  beside  $\delta\epsilon\sigma\mu\omicron\varsigma$ , m.),  $\sigma\omega\mu\alpha\tau$  (n. nom. sing.  $\sigma\acute{\omega}\mu\alpha$ ),  $\delta\omicron\mu\mu\alpha\tau$  (n. for  $\omicron\pi\text{-}\mu\alpha\tau$ ,  $\mathcal{A}\text{Eol. } \delta\omicron\pi\mu\alpha\tau$ , nom. sing.  $\delta\omicron\mu\mu\alpha$ ),  $\epsilon\acute{\iota}\mu\alpha\tau$  (n. for  $\epsilon\acute{\iota}\sigma\text{-}\mu\alpha\tau$ ,  $\mathcal{A}\text{Eol. } \epsilon\acute{\iota}\mu\mu\alpha\tau$ , nom. sing.  $\epsilon\acute{\iota}\mu\alpha$ ), &c.; participial stems in  $\text{-}\alpha\nu\tau$ ,  $\text{-}\epsilon\nu\tau$ ,  $\text{-}\omicron\nu\tau$ ,  $\text{-}\upsilon\nu\tau$ , such as  $\beta\acute{\iota}\beta\alpha\nu\tau$ ,  $\beta\alpha\nu\tau$ ,  $\tau\upsilon\psi\alpha\nu\tau$ ,  $\tau\acute{\iota}\theta\epsilon\nu\tau$ ,  $\theta\epsilon\nu\tau$ ,  $\beta\lambda\eta\theta\epsilon\nu\tau$ ,  $\tau\upsilon\pi\tau\omicron\nu\tau$ ,  $\delta\acute{\iota}\delta\omicron\nu\tau$ ,  $\delta\epsilon\iota\kappa\nu\nu\tau$ , &c.; stems, which perhaps were originally participles, such as  $\text{F}\epsilon\kappa\omicron\nu\tau$  (willing, from R.  $\text{F}\epsilon\kappa$  = Skr. *vas'*, to wish),  $\theta\epsilon\rho\alpha\pi\omicron\nu\tau$ ,  $\lambda\epsilon\omicron\nu\tau$ ,  $\text{'A}\tau\lambda\alpha\nu\tau$  (lit. the bearer, from R.  $\tau\alpha\lambda$  = Skr. *tul*, to bear, cf.  $\tau\lambda\eta\text{-}\nu\alpha\iota$ ,  $\tau\acute{\alpha}\lambda\alpha\text{-}\varsigma$ , &c.),  $\lambda\upsilon\kappa\alpha\beta\alpha\nu\tau$  (the year, lit. the course of light),  $\acute{\omicron}\delta\omicron\nu\tau$  (lit. the eater, from R.  $\epsilon\acute{\delta}$ , to eat, nom. sing.  $\acute{\omicron}\delta\omicron\upsilon\varsigma$ , cf.  $\delta\acute{\iota}\delta\omicron\upsilon\varsigma$ , nom. sing. of participial stem  $\delta\acute{\iota}\delta\omicron\nu\tau$ ), &c.;  $\phi\omega\tau$  (m. a man, nom. sing.  $\phi\acute{\omega}\varsigma$ ) may be an old participle of R.  $\phi\upsilon$  (to produce), and =  $\phi\omicron\text{F}\alpha\tau$  (lit. the producer), cf. Skr. *bhavat* (being) from R. *bhú* (to be); participial stems in  $\omicron\tau$  =  $\text{F}\omicron\tau$ , such as  $\acute{\epsilon}\sigma\tau\alpha\text{F}\omicron\tau$  (nom. sing.  $\acute{\epsilon}\sigma\tau\alpha\acute{\omega}\varsigma$ ),  $\lambda\epsilon\lambda\upsilon\kappa\omicron\tau$  (nom. sing.  $\lambda\epsilon\lambda\upsilon\kappa\acute{\omega}\varsigma$ ), &c.; stems in  $\text{-}\text{F}\epsilon\nu\tau$  (nom. sing. m.  $\text{-}\text{F}\epsilon\iota\varsigma$ , n.  $\text{-}\text{F}\epsilon\nu$ , f.  $\text{-}\text{F}\epsilon\sigma\sigma\alpha$  =  $\text{-}\text{F}\epsilon\tau\gamma\alpha$  from the weak form of the stem  $\text{-}\text{F}\epsilon\tau$  = Skr.  $\text{-}\nu\alpha\tau\ddagger$  (full of, provided with), such as

\* Stems in  $\text{-}\mu\alpha\tau$  are very common, and have arisen perhaps from older forms in  $\text{-}\mu\alpha\nu\tau$ , traces of which are found in the cognate adjectival and other stems in  $\text{-}\mu\omicron\nu$ , and in verbs ending in  $\text{-}\mu\iota\nu\omega$ ; thus we have  $\epsilon\acute{\upsilon}\text{-}\mu\omicron\nu$  (well clad) beside  $\epsilon\acute{\iota}\mu\alpha\tau$ ,  $\acute{\omicron}\nu\omicron\mu\alpha\tau$ , beside  $\acute{\omicron}\nu\omicron\mu\alpha\acute{\iota}\nu\omega$  =  $\acute{\omicron}\nu\omicron\mu\alpha\nu\tau\gamma\omega$ ,  $\chi\epsilon\iota\mu\alpha\tau$  beside  $\chi\epsilon\iota\mu\omicron\nu$  and  $\chi\epsilon\iota\mu\alpha\acute{\iota}\nu\omega$  (compare Skr. *hēman*, m. winter, and *hēmanta*, m. and n. id.). That verbs in  $\text{-}\alpha\iota\nu\omega$  originally possessed  $\tau$  appears not impossible if we compare  $\text{ῥ}\acute{\phi}\alpha\sigma\mu\alpha$  and  $\mu\acute{\iota}\alpha\sigma\mu\alpha$ , which arose from  $\text{ῥ}\acute{\phi}\alpha\tau\mu\alpha$  and  $\mu\alpha\tau\mu\alpha$ , with  $\text{ῥ}\acute{\phi}\alpha\acute{\iota}\nu\omega$  and  $\mu\alpha\acute{\iota}\nu\omega$ . This connexion of  $\text{-}\mu\alpha\tau$  with  $\text{-}\mu\alpha\nu\tau$  is supported by comparing  $\acute{\omicron}\nu\omicron\mu\alpha\tau$  with L. *cognomen* and *cognomentum*, *tegumen* with *tegumentum*, &c.

†  $\Pi\alpha\nu\tau$  (nom.  $\pi\acute{\alpha}\varsigma$ ,  $\pi\acute{\alpha}\sigma\alpha$ ,  $\pi\acute{\alpha}\nu$ ) appears to contain this suffix, and to point back to an I. E.  $kv\acute{a}\text{-}\nu\alpha\tau$  or  $kv\acute{a}\text{-}\nu\alpha\tau\alpha$ , whence L. *quantu-s*, U. *panta*.  $Kv\acute{a}\nu\alpha\tau$  meant "how much," just as Skr. *távant* meant "so much" (cf. L. *tantus*) and  $y\acute{a}\nu\alpha\tau$ . "how much."  $\Pi\acute{\alpha}\sigma\alpha$  ( $\mathcal{A}\text{Eol. } \pi\alpha\acute{\iota}\sigma\alpha$ ) arose from  $\pi\alpha\nu\tau\gamma\alpha$  through the steps  $\pi\alpha\nu\tau\text{-}\sigma\alpha$ ,  $\pi\alpha\nu\tau\text{-}\sigma\alpha$ ,  $\pi\alpha\nu\text{-}\sigma\alpha$ :  $\alpha$  in  $\pi\acute{\alpha}\nu$  is irregularly lengthened; it is short in  $\delta\pi\acute{\alpha}\nu$ .

βροτο<sup>α</sup>Feντ (full of blood), δολο<sup>α</sup>Feντ (crafty), &c. ; stems in -αρτ (the nom. sing. of which ends generally in -αρ, and sometimes in -ωρ, whereas the oblique cases reject ρ\*, and are formed from stems in -ατ, except δάμαρ, f., the oblique cases of which are δάμαρτ-ος, δάμαρτ-ι, &c., compare δόμορτ-ις = δάμαρ, Hesych.), such as φρεᾶτ for φρεαρτ (n. a well, gen. sing. φρεᾶτος and φρητός, nom. pl. Hom. φρεῖᾱτα, Att. φρεῖᾱτα), ἥπατ for ἥπαρτ = Skr. yākr̥t (n. the liver), σκαρτ (n. dung, nom. sing. σκῶρ) = Skr. ś'akr̥t (n. id.), στεατ for στεαρτ (n. fat, beside τὸ σταῖς, gen. σταιτ-ός, dough), ὕδατ for ὕδαρτ (n. nom. sing. ὕδωρ), ἀλειατ (n. meal), κυατ (n. a hole), &c. ; stems in -τητ†, all feminine, such as φιλοτητ (love, nom. sing. φιλότης), &c.

II. *Stems ending in -δ* (which is lost in nom. sing.)‡ : λαμπαδ (f.), δρομαδ (m. f.) &c. ; Θεμιδ (f. beside Θεμι, Dor. Θεμιτ, and Ep. Θεμιστ), Ἀρτεμιδ (f. beside Dor. Ἀρτεμιτ), Θετιδ (f. beside Θετι), ἐλπιδ (f.), αἰδ (m. only used in the oblique cases) ; ποδ (m. nom. sing. πούς, the compounds of which can also form their acc. sing. like stems in ου, e. g. Οἰδίπουδα and Οἰδίπουν, τρίποδα and τρίπουν, &c.) ; χλαμῦδ (f.), δαγῦδ (f. a doll) ; φωδ (f. a blister) ; παιδ (m. f.) ; κλειδ§ (f. acc. sing. κλεῖν and κλείδα, acc. pl. κλείς and κλείδας), &c.

\* We find other instances of the omission of ρ ; thus ποτί = Kret. πορτί = πορί = Skr. prati (πρός), δρύφακτος for δρυφρακτος from R. φραγ, whence φράσσω = φραγγω, L. pedo = Gr. πέρδω, E. speak = G. sprechen, &c.

† This stem-termination arose from an I. E. -tāti, which is found in Skr. śivatāti (f. benevolence), sarvatāti = Gr. ὅλοτη, &c., and in the Latin plural genitives, civitatū, ætatū, voluptatū, &c.

‡ In Æolic δ is also lost in acc. sing. : thus we find in this dialect such forms as κνᾱμιν, σφραῖγιν, κλᾱῖν, πᾱῖν, χλάμυν, for κνημίδα, σφραγίδα, κληίδα, παῖδα, χλάμυδα.

§ Beside κλείς we find the Doric form κλάξ, which Ahrens ("De Dialecto Dorica," pp. 94, 140, 141), considers to have arisen from κλαῖς, ις being changed into ξ. This explanation is very doubtful, and it is much more likely that the final guttural in κλάξ arose from the dental in κλειδ. If this

III. *Stems ending in -θ* (which is lost in nom. sing.): Παρνηθ (m. a mountain in Attica); ὄρνιθ (m. f. beside ὄρνι and Dor. ὄρνιχ); κορῦθ (f.), κωμῦθ (f. a sheaf of hay); ἔλμινθ (f. a worm, beside ἔλμι and ἔλμιγγ), πειρινθ (f. a wicker basket); Τιρυννθ (f.); &c.

IV. *Stems ending in -ς* (preceded by any vowel).

1°. *Stems in -ας*: σελας (n. gen. sing. σέλαος for σέλα-σος), κνεφας (n. gen. sing. κνέφαος and κνέφους, the latter being from a stem κνεφες), βρετας (n. an image), κωας (n. a fleece), οὔδας (n. the ground), γηρας (n.), δεπας (n.), &c. These stems appear to be closely connected with others in -ες: thus βρέτας, κῶας, οὔδας, &c., form their oblique cases from βρετες, κωες, οὔδες, &c. It has been suggested that stems in -ας have arisen from older forms in -ατ, and accordingly they have been compared with such stems as κερατ (n. a horn, whence nom. sing. κέρας, gen. sing. κέρᾱτ-ος and κέρως = κεραος, τ being thrown out), κρεατ (n. flesh, for κρεΐγατ, whence nom. sing. κρέας and κρεῖας, gen. sing. κρέως).

2°. *Stems in -ες*: adjectival stems in -ες such as σαφες, &c., of which the nom. sing. masc. and fem. ends in -ης; substantival masc. stems in -ες, of which the nom. sing. also ends in -ης, as Σωκρατες, Ἄρες, &c., while the acc. sing. may either come from these stems (Σωκράτη = Σωκρατες-α), or from stems in -α (Σωκράτην); substantival neuter stems in -ες, which becomes -ος in the nom. sing.; e. g. γενες, nom. sing. γένος, gen. sing. γένους = γενεσος = L. *generis* for *genesis*, from St. *genes*, &c. These latter stems have frequently side forms ending in -ο: thus we have σκοτες (n.) and σκοτο (m.), ὄχες (n.) and ὄχο (m.), κλαδες (found in dat. pl. κλάδεσι) beside κλαδο (m.), δενδρες (n.) beside δενδρο (n.), ἀνδραποδες

be so, κλάξ bears nearly the same relation, or κλείς (for κλειδς), that Dor. ὄρνιχ does to ὄρνιθ. Θ and χ appear to be interchanged in Mod. Gr. Λιθαδό-νησα from Λιχάδες and Mod. Gr. ἤρχα from ἤλθον. Compare also Dor. ψάφαξ (m.) from St. ψαφακ with ψηφίς (f. dim. of ψῆφος) from St. ψηφίδ. • \*

(found in dat. pl. ἀνδραπόδεσσι) beside ἀνδραποδο\*(n.), and many others..

3°. *Stems in -ος* : αἶδος (f. nom. sing. αἰδως, gen. sing. αἰδοῦς = αἰδοσ-ος), ἥχος (f. nom. sing. ἡχώ, gen. sing. ἡχοῦς = ἡχοσ-ος), ἦος (f. nom. sing. ἡώς), χρος (m. nom. sing. χρώς, gen. sing. χροός = χροσ-ος, beside Attic stem χρωτ), πειθος (f. nom. sing. πειθώ, gen. sing. πειθοῦς), &c. The vocative singular of these stems ends in -οῖ, as αἰδοῖ, ἡχοῖ, πειθοῖ, &c., and various theories have been proposed to account for these forms. One writer suggests that the original form of these stems ended in -ονι; another that they ended in -ον, and that ν was merely vocalized into ι, as in Æol. μέλαις for μελανς, &c., τίθεις for τιθεῖς, &c.; another that they ended in -ονι; another that they ended in -ο; another that they ended in -οι, inasmuch as we find such nominative forms as Λητώ, Σαπφώ, &c., and, lastly, another that σ is vocalized into ι. Whatever may be the true explanation of this vocative in -οι, it apparently bears a remarkable resemblance to the Sanskrit vocative in *ē* of feminine nouns in -ā, e. g. *śivē* from *śivā*; for ω : ā :: οι : ē (ai).

4°. *Stems in -υς* : μῦς (m. nom. sing. μῦς, gen. sing. μύος = μυσ-ος).

\* 5°. *Stems in -ως* : θως (m. a jackal, nom. sing. θώς, gen. sing. θωός = θωσ-ος), ἥρως (m. gen. sing. ἥρωος), μητρως (m. avunculus), ἄλως (f. the threshing-floor, found in acc. sing. ἄλωα = ἄλωσ-α, Arat. 940), καλως (m. a rope), &c. Some of these stems have side forms in -ων, and most of them can also be declined according to the Attic second declension.

V. *Stems ending in -ν* (preceded by any vowel).

1°. *Stems in -αν* : ταῶν (nom. sing. m. τάλας, f. τάλαινα = ταλανγα, n. τάλαν), and similarly μελᾶν, the only other adjectival stem in -αν; Πᾶν (m. Pan, nom. sing. Πάν), παιᾶν (m. nom. sing. παιάν).

\* 2°. *Stems in -εν* : adjectival stems in -εν, such as ἄρσεν (nom. sing. m. and f. ἄρσην, n. ἄρσεν), τερεν (nom. sing. m.

τέρην, f. *τέρεινα*, n. *τέρεν*); φρεν (f. nom. sing. *φρήν*); ποιμεν (m. nom. sing. *ποιμήν*); κτεν (m. a comb, nom. sing. *κτείς*), ἐν (nom. sing. m. *εἷς*, n. *ξν*); &c.

3°. *Stems in -ην* (nom. sing. *-ην*): *μην* (m. beside Ion. *μεῖς* = *μεν* + *ς*; Curtius considers that the original form of this stem was *μηνς*, whence comes Æolic *μῆννος* for *μηνσος*, cf. L. *mens-i-s*), *χην* (m. beside *χηνο* found in *χηνο-βοσκός*; Curtius considers that this stem was originally *χενς*, or a fem. stem *χενσι* beside Skr. *hañsi* = I. E. *ghansī*, Ch. Sl. *gañst*), *Ζην* (m. *Ζοῆς*), *Ἑλλην* (m.), *πενυθην* (m. an inquirer), *πυρην* (m. a fruit-stone), *ψην* (m. the gall-insect), &c.

4°. *Stems in -ιν*: *ῥιν* (f. the nose, nom. sing. *ρίς*, and later *ρίν*), *θιν* (m. f. a heap, nom. sing. *θίς*, and later *θίν*), *ικτίν* and *κτίν* (m. a weasel), *δελφίν* (m.), &c.

5°. *Stems in -ον*: *χθον* (f. perhaps for an older *χθομ*, compare *χαμαί*, *χθαμ-αλός*, Z. *zem*, earth, L. *humu-s*, Ch. Sl. *zem-ŕa*, land); adjectival stems in *-ον* (nom. sing. m. f. *-ων*, n. *-ον*), such as *μειζον* and other comparatives, in which *ν* may be thrown out, and the vowels contracted as in *μείζονς* for and beside *μείζονες*, while other adjectival stems in *-ον*, as *σωφρον*, *εὐδαιμον*, cannot throw out *ν*; *δαιμον* (m.), *ἡγεμον* (m.), *χιον* (f.); *ἁηδον* (f. nom. sing. *ἁηδών*, gen. sing. *ἁηδό-νος* and *ἁηδοῦς*), *χελιδον* (f. nom. sing. *χελιδών*, gen. sing. *χελιδό-νος* and *χελιδοῦς*), *εἰκον* (f. nom. sing. *εἰκών*, gen. sing. *εἰκό-νος* and *εἰκοῦς*), *Γοργον* (f. nom. sing. *Γοργώ* and *Γοργών*, gen. sing. *Γοργό-νος* and *Γοργόος*, Dor. *Γοργῶς*, Æol. *Γόργως*), &c. These feminine stems in *-ον* partly agree in their declension with feminine stems in *-ος*: e. g. *πειθοῦς* (gen. sing. of St. *πειθος*) is similar to *εἰκοῦς* (gen. sing. of St. *εἰκον*). This similarity is, however, not a sufficient basis on which to build the theory that all these stems in *-ον* and *-ος*, such as *αιδος*, *πειθος*, *εἰκον*, &c., were originally identical.

6°. *Stems in -υν*: *μοσσύν* (m. a tower, nom. sing. *μόςσυν*), *Φόρκυν* (nom. sing. *Φόρκυς*), *Γορτύν* (nom. sing. *Γόρτυς*). The

oblique cases of κύων (m. f.), with the exception of the vocative κύον, are formed from St. κύν.

7°. *Stems in -ων*: Ἀπολλων, Ποσειδων, κλων (m. a branch, nom. sing. κλών), αἰων (m.), ἥρων (m. found in Syracusan ἡρώνεσσι,\* beside St. ἥρωες), ταών (m. a peacock, nom. sing. ταῶς, which is generally declined according to the Attic second declension), ἄλων (f. nom. sing. ἄλως, also declined according to Attic second declension), τυφων (m. nom. sing. τυφών and τυφώς), &c.

8°. *Stems in ν* preceded by a consonant: ἄρν (m. f. a lamb, without nom.), Πυκν (f. the Pnyx, nom. sing. Πυνύξ)\*.

VI. *Stems ending in -ρ* (preceded by any vowel).

1°. *Stems in -αρ* (nom. sing. -αρ): νεκταρ (n.), ψαρ (m. the starling), μακαρ (m. happy, nom. sing. μάκαρ, Æol. μάκαρες), ὄαρ (f. a wife, from ὀ = Skr. sa, with, and a root σαρ, to join, whence σειρά, a rope; or from ὀ = Skr. sa and Far = L. vir; in the former case ὄαρ would be for ὀσαρ, and in the latter for ὀFar).

2°. *Stems ending in ερ*: χερ (f. nom. sing. χείρ, Æol. χέρς, beside St. χειρ), αἶθερ (m. nom. sing. αἰθήρ), πατερ (m.), ἀνερ (m.), &c.

3°. *Stems in -ηρ*: θηρ (m. a wild beast), κρατηρ (m.), &c.

4°. *Stems in -ορ*: ῥήτορ (m. nom. sing. ῥήτωρ), ἦτορ (n. nom. sing. ἦτορ, the heart), ἄορ (n. a sword), &c.

5°. *Stems in υρ*: πῦρ (n. nom. sing. πῦρ), μαρτυρ (m. nom. sing. μάρτυς, and later μάρτυρ), Λιγύρ (m.), Κερκύρ (m.).

6°. *Stems ending in -ωρ*: φωρ (m. a thief), πελωρ (n.), ἰχωρ (m.), &c.

VII. The only Greek stem in -λ is ἅλ (m. salt, f. the sea, nom. sing. ἅλς).

## §. 120. LABIAL STEMS.

I. *Stems ending in -π* : *λαιᾶπ* (f. a storm, nom. sing. *λαῖ-λαψ*), *θεράπ* (m. found in acc. sing. *θέραπα* for *θεράποντα*) ; *ῥίπ* (m. nom. sing. *ρίψ*, a. mat), *κνίπ* (m. an ant) ; *ὄπ* (f.), *Ἀθιωπ* (m.), *καλαυροπ* (f. a shepherd's crook) ; *γῦπ* (m. a vulture) ; *ὦπ* (m. f.), &c.

II. *Stems ending in -β* : *Ἀράβ* (m.), *λίβ* (m. a drop, from same root as *λείβω*), *Λιβ* (m. the south-west wind, lit. the moist wind, connected with last stem), *χερνιβ* (f.), *χαλυβ* (m. steel).

III. *Stems ending in -φ* : *νιφ* (f. snow, found only in oblique cases), *κατηλιφ* (f. an upper story, nom. sing. *κατῆλιψ*), *λιφ* (f. nom. sing. *λίψ*, *ἐπιθυμία* Hesych.).

## §. 121. STRONG AND WEAK STEMS.

The strong form of the stem is kept in Greek in many places where we find in Sanskrit the intermediate or the weak form (consult §. 112). We however find several examples where there is a change of stem in Greek.

The adjectival suffix **Feντ** = I. E. *vant* assumes frequently the weak form **Feτ**, as in *μητιόεσσα* = *μητιοFeτγα*, fem. of *μητιόεις* = *μητιοFeντ-ς*, *χαρίεσσα* = *χαριFeτγα*, fem. of *χαρίεις* = *χαριFeντ-ς*, &c. The weak form of the stem is also found in the dat. pl. masc. *χαρίεσι* = *χαριFeτσι*, &c., and in the comparative and superlative of such adjectives, as *χαριέσ-τερος*, *χαριέσ-τατος* = *χαριFeτ-τερος*, *χαριFeτ-τατος*, &c.

The above I. E. suffix *vant* also assumes the weak form **For** in participles in *-ως*, as *λελυκώς* = *λελυκ-For-ς*, *λελυκυῖα* = *λελυκ-For-γα*, &c.: when a vowel precedes **For**, it generally becomes **Fωτ**, as in *ἔστεώς* (gen. sing. *ἔστεῶτος*) = *ἔστα-For-ς*, *τεθνεώς* = *τεθνα-For-ς*, &c. This suffix *vant* is also supposed to appear in *κύων* = I. E. *kū-vant*, from *kū* (to howl, c. f. Gr. *κω-κύ-ω*), which has two stems, the strong *κυν* and the weak *κυν*. In Latin we find this stem appearing as *can* in *can-is*,

and *cat* in *cat-ulus*, and in Goth. we find it as *hund* in *hund-s*, E. *hound*.

The I. E. suffix *mant* appears in the strong form *μαντ* and the weak *μαν*, *ματ*, *μον*: thus we have *ιμαντ* (m. a strap, nom. sing. *ιμάς* from R. *i* = Skr. *si*, to bind, whence *síman*, f. a boundary, and *símanta*, m. a separation of the hair on each side, so as to leave a distinct line on the top of the head), beside *ιματ* (whence *ιμάσσω* = *ιματγω* and *ιμάσθλη* = *ιματθλη*, a whip), and *ιμον* (whence *ιμονιά*, the rope of a well), *ὄνοματ* (n. nom. sing. *ὄνομα*) beside *ὄνομαν* (whence *ὄνομαίνω* = *ὄνομαν-γω*), which point back to an older stem *ὄνομαντ*, c. f. L. *cognoment-um*, &c.; *σπερματ* beside *σπερμαν* (whence *σπερμαίνω*), &c. Stems in *-μῖν* are also connected with those in *ματ*, as *ρήγματ* (n. a breach) with *ρήγμῖν* (m. breakers), &c.

The oblique cases of participles whose stems end in *οντ* and *αντ* retain the strong form: but we find a few examples where the weak stem apparently shows itself; thus we have Æol. *ἔασσα* and *ἔσσα* (fem. of *ᾔν*, being) which must be for *ἔσατγα* and *ἔτγα*, *σατ* being the weak form of participial stem *οντ* = I. E. *sant* = L. *sent* in *ab-sent-um*, &c. This weak form of the participle of *εἰμι* appears also to be found in *ἐτεός* (true) = Skr. *satyas* (id.), *ἔτυμος*, *ἐτήτυμος*.

Nouns of relationship in *τηρ*, such as *πατήρ*, *μήτηρ*, have two stems ending in *τερ* and *τρ*, and may form their oblique cases from either, e. g. gen. sing. *πατέρος* and *πατρός*, *μητέρος* and *μητρός*, dat. sing. *πατέρι* and *πατρί*, *μητέρι* and *μητρί*, &c.; but in acc. sing. we only find *πατέρα* and *μητέρα*, &c., while in dat. pl. the stem ends in *τρα*, as *πατράσι*, &c.

## §. 122. VOCALIC STEMS.

I. *Stems in -a, -η, and -ο* (= I. E. *ā* and *ā*).

1°. *Stems in -ο* (m. f. n.), as *ἵππο* (m. f.), *φορο* (m.), *νοσο* (f.), *ζυγο* (n.), &c.

Many consonantal stems have side-forms in *ο*, especially in Æolic, where we find the stems *αγωνο*, *φυλακο*, *μαρτυρο*,

ἑκατονχειρο, γεροντο, παθηματο, &c. In Bæotic we find ἦγυς = αἴγοις from stem αιγο.\*

2°. Stems in -ǣ, -ā, -η, as μουσǣ (f. nom. sing. μοῦσα), χωρā (f. nom. sing. χώρα), πολιτā (m. nom. sing. πολίτης), νεανιā (m. nom. sing. νεανίας), Ἑρμη (m. nom. sing. Ἑρμῆς) ἱπποτǣ (m. nom. sing. Ἑρ. ἱππότης), &c.

II. Stems ending in -ι, as ποσι (m. for ποτι = Skr. pati), δηρι (f. strife), πολι (f.), κῆ (m. a worm), σιναπι (n. mustard), ἰδρι (m. f. knowing), &c. Some stems in -a and -o became ι-stems by throwing out these vowels, as Dor. Δεῖνι-ς, = Δεινία-ς and in later Greek Δημήτρι-ς = Δημήτριον-ς, Διονῦσι-ς = Διονύσιον-ς.

III. Stems in -υ, as ιχθυ (m.), πηχυ (m.), ἐγγελυ (f.), δακρυ (n.), ἄστυ (n.), γλυκυ (m. n.), &c.

IV. Diphthongal stems, as ναυ (f.), γρᾱυ (f.), φονευ (m.), βασιλευ (m.), υῖευ (m. beside υῖο), Ἄρευ (m. beside Ἄρες and Ἄρη), Ζευ (m.), &c.; οἶ (m. f. a sheep, the only diphthongal stem in οἶ; it is also an ι-stem, ὄϊ); βου (m. f.), χου (m. con-guis).

The original stem of λᾶας or λᾶς (m. a stone), was probably λαF: its declension is very similar to that of ναῦς, thus we have gen. sing. λᾶος (beside λάου, as if from an α-stem λᾶα), dat. sing. λᾶϊ, acc. sing. λᾶα (beside λᾶαν and λᾶν from St. λᾶα), &c. That λᾶας originally contained a digamma may be inferred from the words λεύω (I stone), λευσμός, &c. Bopp and Benfey connect it with Skr. grāvan (m. a stone).

## LATIN STEMS.

### §. 123. Guttural Stems.

I. Stems in -c (nom. sing. m. f. n. x and c): fǣc (f. a torch), pǣc (f.) ferǣc (m. f. n. fruitful), nǣc (f.), halǣc (nom. sing. f. halex, and n. halec, brine of fish), salǣc (f. a willow),

\* Consult Ahrens de Dialectis Æolicis et Pseudæolicis, pp. 120, 236.

*supl̥ic* (m. f. n.), *rad̥ic* (f.), *fel̥ic* (m. f. n.), *Cappad̥oc* (m.), *præc̥oc* (m. f. n.) *v̥oc* (f.), *atr̥oc* (m. f. n.), *cr̥uc* (f.), *tr̥uc* (m. f. n.) *Poll̥as* (m.), &c.

II. *Stems in -g* (nom. sing. *x*) : *gr̥eg* (m.), *r̥eg* (m.), *rem̥ig* (m.), *Allobr̥ög* (m.), *conj̥üg* (m. f.), *fr̥üg* (f.), &c.

## §. 124. DENTAL STEMS.

I. *Stems in -t* (which is lost before the nom. sing. *s*, the preceding vowel being frequently lengthened in 'compensation') : *an̥t* (f. a duck), *æt̥at* (f.), *abi̥t* (f.), *qui̥t* (f.), *mil̥it* (m.), *l̥it* (f.), *c̥ot* (f. a whetstone), *virt̥ut* (f.), &c. *Oss* (n. a bone), *mell* (n.), *fell* (n.), were originally *t*-stems, for *oss* = *ost* (as *messis* = *mes-tis* = *met-tis* from R. *met*, cf. Gr. ὀστ-οῦν), *mell* = *melt* (c. f. Gr. μελιτ, Goth. *milith*, *honey*), *fell* = *felt*, and this perhaps for *fel-ti*.

II. *Stems in -d* (which is lost before the nom. sing. *s*, the preceding vowel being frequently lengthened in 'compensation') : *v̥ad* (m. a surety), *p̥ed* (m.), *her̥ed* (m. f.), *obs̥ud* (m. a hostage), *cust̥od* (m.), *pec̥ud* (f.), *pal̥ud* (f.), &c.

III. *Stems in -s* : *m̥ās* (m. a male), *v̥ās* (n. a vessel), *gen̥ēs* (n. nom. sing. *genus*, gen. sing. *generis* = *genesis*), *cin̥s* (m. gen. sing. *cineris* = *cinisis*, the second *i* becoming *e* through the influence of the succeeding *r*), *gl̥is* (m. a dormouse), *arb̥ōs* (f. nom. sing. *arbor* and *arbos*), *corp̥ōs* (n. nom. sing. *corpus*), *m̥ōs* (m.), *ōs* (n.), *Lem̥ūs* (m. ghosts, found only in plural *Lem̥ūres*), *Lig̥ūs* (m.) *s*, *j̥ūs* (n.), *m̥ūs* (m.), &c. *Farr* (n. corn) is probably for *fars*, *rs* becoming *rr*, as in *ferre* for *ferse*, and as *ls* becomes *ll* in *velle* for *velse*. *V̥ās* (n. gen. sing. *vasis*), is the only stem that retains *s* throughout its whole declension ; in other stems it becomes *t* between two vowels. The Latin infinitive in *-re* is perhaps the dative of an old stem in *-as* ; *le-gere* would then be for *leg-es-e*, just as in Vedic similar datives are used as infinitives, such as *sahasē* (to strengthen, lit. for strengthening, Rig. I. 16, 6), &c.

IV. *Stems in -n*: *rēn* (m. the kidney), *liēn* (m. the spleen, beside *liēni*) ; stems in *-min* = I. E. *-man*, nom. sing. (*-men*), as *nomin* (n.), *agmin* (n.), &c. ; *flamin* (m. nom. sing. *flamen*), *tibicin* (m.), *tubicin* (m.), *pectin* (m.), *sanguin* (nom. sing. m. *sanguis*, and n. *sanguen*), *homin* (m. nom. sing. *homo*), from an older *homōn* which is found in O. L. acc. sing. *homōnem* and *hemōnem*, *cardin* (m. a hinge, nom. sing. *cardo*), *praedon* (m. nom. sing. *praedo*), *carn* (f. nom. sing. *caro*), for *caron*, &c. The stems of *canis* and *juvenis* were originally *n*-stems, as we see from the gen. pl. *can-um* and *juven-um*, and the corresponding Sanskrit stems *s'van* and *yuvan*, nom. sing. *s'vá* and *yuvá*.

V. *Stems ending in -r*: *baccār* (n. a kind of berry), *calcār* (n. a spur), *carcār* (m.), *vēr* (n.), *æquār* (n.), *dolār* (m.), *fulgār* (n.), *fūr* (m.), &c.

VI. *Stems ending in -l*: *sāl* (m. n. salt), *animāl* (n.), *pugl* (m.), *sōl* (m.), *consul* (m.), &c.

### §. 125. LABIAL STEMS.

I. *Stems ending in -p*: *dap* (f.), *adip* (m. f. nom. sing. *adepts*, fat); compounds, the latter part of which is derived from R. *cap* (to take), as *princip* (m. nom. sing. *princeps*), *aucup* (m. nom. sing. *auceps*), &c.

II. *Stems ending in -b*: *urb* (f.), stems in *-b* are generally short forms of other stems, as *pleb* (f. nom. sing. *plebs*), is for *plebi* (gen. pl. *plebi-um*), *scrob* (m. f. a ditch), is for *scrobi*, &c.

III. There is only one stem in *m*, viz., *hiem* (f. nom. sing. *hiems* and *hiemps*).

IV. There is only one stem in *-v*, viz., *niv* (f. snow, nom. sing. *nix*, gen. sing. *nivis*) beside *ningui*.

### §. 126. STRONG AND WEAK STEMS.

The distinction between strong and weak stems has only manifested itself in Latin in a few cases: thus *patr* is the weak

form of St. *pater*, and from it in Classical Latin the oblique cases of *pater* are formed, whereas in Old Latin *e* was retained, as in the Gen. sing. *Diespiter-is*, *Opiter-is*, &c., similarly *ventr*, *mater*, are the weak forms of the stems *venter* and *mater*.

*Carn* is the weak form of *carōn* (nom. sing. *caro*) and may be compared with Skr. *rāg'ñ*, the weak form of St. *rāg'ān*.

The participles in *-ant* and *-ent* retain their strong forms throughout their declensions, but it is possible that the weak form may show itself in the following examples: *pariēt* (m. a wall, nom. sing. *paries*) from *par* = Skr. *pari* = Gr. *περί* and *ient* (going), and therefore, meaning literally, "what goes round," *abiet* (f. the fir), from *ab* and *ient*, and meaning literally "what goes up," *teget* (f. a mat, lit. "what covers" for *tegent*, part. of *teg-o*), *potestat* for *potet-tat* = *potent-tat*, *egestat* for *eget-tat* = *egent-tat*, while we have the strong form of the participial stem in *voluntat*, O. *herentat*.

## §. 127. VOCALIC STEMS.

### 1. Stems ending in *-a* (*a*, *e*, *o*).

1°. Stems in *-a* (which lose the final *s* of the nom. sing. although it originally existed there, as in *paricidas* found in the law of Numa, and *hosticapas*, i. e. *hostium captor*), as *equā* (f. originally *equā*), *incōlā* (m.), *formā* (f. but *formā* on the inscription on the tomb of the Scipios), *aquilā* (f. but *aquilā* in Ennius), &c. Greek nouns in *-as* lose the final *s* when borrowed by the Latin, as *Pintia* (for *Πιντίας*), *Apella*, *Mena*, &c., Gr. *ποιητής* (m.) becomes *poeta* and *χάρτης* (m.) becomes *charta* (f.)

2°. Stems ending in *-e* (all of which are feminine except *dies*, which is either masculine or feminine, while *meridies* is always masculine): *re* (nom. sing. *res*), *fide* (f.), *plebe* (f.) &c. These stems are closely connected with those in *-a*, and we frequently find two forms of the same stem existing beside each other, one ending in *-a* and another in *-e*, as *barbaria* and *barbarie*, *materia* and *materie*, *effigia* and *effigie*, &c.

3°. *Stems in o*: *equo* (m. nom. sing. *equos*, later *equus*), *alvo* (f. the stomach, nom. sing. *alvos*, later *alvus*), *jugo* (n. nom. sing. *jugom*, later *jugum*), &c. We frequently find stems in *-a* beside stems in *-o*, as *transfuga* beside *profugo*, *collega* beside *sacrilego*, *Graiugena* beside *Asiageno* and *privigno* (= *privigeno*), &c. When *r* preceded *o*, the latter was generally dropped and *e* inserted in the nom. sing. when another consonant immediately preceded, as in *caper* = Gr. *καπρός*, *ager* = Gr. *ἀγρός*, &c.: this inserted *e* was not retained in the oblique cases, as in gen. sing. *capri*, *agri*, &c., except where it belonged to the root, as in *corniger*, *armiger*, *prosper* (from *pro* and R. *sper*, whence *sper-o*, *spes*, O. L. acc. pl. *sper-es*), &c., and in some other cases as O. L. *magisteres* = *magisteri*, *dexteri* beside *dextri*, &c. In many cases *o* is retained in the nominative after *r*, as in O. L. *socerus* = *socer*, O. L. *puerus* = *puer* (= *poverus*, which also became *por* in the proper names, *Marcipor*, *Publipor*, &c., and was then declined as a stem in *-r*), O. L. *vulturus* = *vultur*, *numerus*, *umerus*, *uterus*, *prosperus* = *prosper*, *herus*, *verus*, *laurus*, *taurus*, *severus*, *serus*, *mirus*, *virus*, *-parus* (*oviparus*), *-vorus* (*carnivorus*), *purus*, *murus*. After *l* *o* is only omitted in *famul* beside *famulus*, and *nihil* = *nihilum*, just as in N. U. *katel* = L. *catulus* and O. O. *Mutl* = *Mutilus*.

*O* is also lost in nom. sing. in O. L. *damnas* for *damnats* = *damnatos*, just as in N. U. *tacez* = L. *tacitos*, O. O. *hürz* = L. *hortos*, &c. In Old Latin *o* was lost after *i*, and then the nom. sing. *s* was itself frequently lost, as in *Clodis* and *Clodi* = *Claudius*, *Cornelis*, and *Corneli* = *Cornelius*, &c.

*O* was written in the nom. sing. of all *o*-stems until about the middle of the third century, B. C., when *u* took its place, except in stems ending in *-vo*, in which *o* was still written, as in *servo-s*, *equo-s*, &c.

II. *Stems ending in -i* (nom. sing. m. f. *-is*, and *-es*, n. *-e*): *amni* (m. nom. sing. *amnis*), *torqui* (m. f. nom. sing. *torquis* and *torques*), *avi* (f. nom. sing. *avis*), *scrobi*

(f. a ditch. nom. sing. *scrobs* and *scrobis*), *sinapi* (mustard, nom. sing. f. *sinapis*, and n. *sinape*), *mari* (n. nom. sing. *mare*, pl. *mari-a*), *sali* (n. the sea, nom. sing. *sale* beside St. *sal*), *ossi* (n. a bone, nom. sing. *osse* beside St. *oss*), *lacti* (n. milk, nom. sing. *lacte* beside St. *lact*), &c. In nouns formed with suffix *-ti* the stem of the nom. sing. generally ends in *-t* as *menti* (f. nom. sing. *mens* = *ments*), *morti* (f. nom. sing. *mors* = *morts*), *juventuti* (f. nom. sing. *juventus* = *juventuts*), *civitati* (f. nom. sing. *civitas* = *civitats*), &c. Stems ending in *-ri* often lose the final *i* and insert *e* before *r*, like stems in *-ro*; *imbri* (m. nom. sing. *imber*), *acri* (m. f. n. nom. sing. m. *acer* and *acris*), *silvestri* (m. f. n. nom. sing. m. *silvester* and *silvestris*), &c. Similarly *i* is sometimes lost when preceded by *l* as in *rigili* (m. f. n. nom. sing. m. *vigil*), *pugili* (m. nom. sing. *pugil*), &c. *I* is frequently added to adjectival stems in *-u*, and thus new stems in *-i* are formed, as *brevi* = *bregu-i* from *bregu* = Gr. *βραχυ*, *gravi* = *garu-i* from *garu* = Gr. *βαρυ* = Skr. *guru*, *levi* = *legu-i* from *legu* = Gr. *ελαχυ* = Skr. *laghu*, *suavi* = *suadu-i* from *suadu* = Gr. *ήδυ* = Skr. *svādu*, *pingui* from *pingu* = Gr. *παχυ*, *tenui* from *tenu* = Gr. *τανυ* = Skr. *tanu*. *I* is also frequently employed to lengthen consonantal stems, as in *voc-i-bus*, *duc-i-bus* for *voc-bus duc-bus*, *amant-i-a*, *amant-i-um*, *amant-i-bus*, &c. *Vates* is for *vats* (gen. pl. *vat-um*), from a root = Z. *vat* (to speak); *canis* (and *canes*) is for *cans* (gen. pl. *can-um*); *navis* is for *navs* = Gr. *ναύς* = Skr. *nāus*; O. L. *Jovis* (nom. sing.) = *Jovs* = Gr. *Ζεύς* = Skr. *dyāus*, *bovis* or *bos* = *bovs* = Gr. *βοῦς* = Skr. *gāus*.

III. *Stems ending in -u*: *fructu* (m.), *lacu* (m.), *socru* (f.), *manu* (f.), *cornu* (n.), *genu* (n.). These stems are often interchanged with others in *-o*: thus beside the stems *senatu*, *tumultu*, *cupressu*, *penu* (provisions), &c., we also find the stems *senato*, *tumulto*, *cupresso*, *peno* (n.), &c. In some cases we find consonantal side forms of *u*-stems, as *pecūd* (f.), and *pecos* (n.) beside *pecu* (n.), *impet* (m.) beside *impetu* (m.), *penos* (n.) beside *penu* (f.).

No Latin stem ends in a diphthong.

## THE CASES.

§. 128. *The Nominative Singular.*

The nominative singular masculine and feminine is formed from the stem by the addition of *s*, which is derived from the pronominal root *sa* (*sa* = Gr. *ὁ*, *sā* = Gr. *ἡ*). The nominative singular neuter is identical with the acc. sing. and consequently adds *m* to the stem in the case of *a*-stems, while in all others it is identical with the stem itself, subject only to the euphonic laws peculiar to each language.

I. *Sanskrit Nom. Sing.* In all consonantal stems *s* is omitted, and in some cases the vowel of the final syllable is lengthened in compensation for this omission, and in others not: thus *durmanās* = *durmanas* + *s*, is nom. sing. of St. *durmanas* = Gr. *δυσμενες*, whereas *bharan* = *bharant* + *s*, is nom. sing. of St. *bharant* = Gr. *φεροντ*. Masc. and fem. stems in *-ār* and *-ar* reject both *r* and *s*, and form their nom. sing. in *-ā*: thus *pitā* is nom. sing. of St. *pitar* = Gr. *πατερ*, and *dātā* is nom. sing. of St. *dātār* = Gr. *δοτηρ*. Masc. and fem. nouns in *-an* and *-in* reject both *n* and *s*, and lengthen preceding vowel: thus, *rāḡā* is nom. sing. of St. *rāḡan* (m. a king), and *dhant* is nom. sing. of St. *dhanin* (rich). In all vocalic stems *s* is retained, except in feminine ones which end in *-ā* or *-ī*, if the latter are polysyllabic. When *ā* however belongs to the root, *s* remains as in *vis'vapā-s* (m. and f. all preserving, from *vis'va*, all, and *pā*, to preserve), *dhanadā-s* (m. and f. wealth-giving, from *dhana*, wealth and *dā* to give).\*

II. *Greek Nom. Sing.* In the case of guttural and labial stems, *s* is simply added, and the nom. sing. ends in *ξ* and *ψ*, as *ψύλαξ* from St. *ψυλακ* (m.), *φλόξ* from St. *φλογ* (f.), *ὄψ* from St. *ὄπ* (f.), &c. In dental stems *r* and *δ* are never kept

\* For further particulars as to forming the nom. sing. in Sanskrit, consult §. 104, and §. 107-113; also Bopp's and Max Muller's "Sanskrit Grammars."

before  $\varsigma$ , but always disappear, and the preceding vowel is generally lengthened in compensation: thus we have  $\chi\acute{\alpha}\rho\iota\varsigma$  from  $\chi\alpha\rho\iota\tau$  (f.),  $\lambda\alpha\mu\pi\alpha\varsigma$  from  $\lambda\alpha\mu\pi\alpha\delta$  (f.),  $\pi\acute{o}\upsilon\varsigma$  from  $\pi\omicron\delta$  (m.),  $\tau\epsilon\tau\upsilon\phi\acute{\omega}\varsigma$  from  $\tau\epsilon\tau\upsilon\pi\omicron\tau$ ,  $\nu\acute{\upsilon}\xi$  from  $\nu\upsilon\kappa\tau$ , &c. In  $\delta\acute{\alpha}\mu\alpha\rho$  from  $\delta\alpha\mu\alpha\rho\tau$  (f.) both  $\tau$  and  $\sigma$  disappear. Stems in  $-\nu\tau$  sometimes lose both consonants before  $\sigma$ , as in  $\tau\acute{\upsilon}\psi\acute{\alpha}\varsigma$  from  $\tau\upsilon\psi\alpha\nu\tau$ ,  $\delta\acute{o}\upsilon\varsigma$  from  $\delta\omicron\nu\tau$ ,  $\theta\acute{\epsilon}\iota\varsigma$  from  $\theta\epsilon\nu\tau$ , &c., and sometimes lose  $\tau$  and  $\varsigma$ , retaining  $\nu$ , as in  $\phi\acute{\epsilon}\rho\omega\nu$  from  $\phi\epsilon\rho\omicron\nu\tau$ , &c. The Æolic dialect kept  $\nu$  before  $\varsigma$ , as in  $\tau\iota\theta\acute{\epsilon}\nu\varsigma = \tau\iota\theta\acute{\epsilon}\iota\varsigma$ , and in this respect is similar to Zend, Latin, Lithuanian, and Old Prussian; thus we have Z. *barais* = L. *ferens* = Gr.  $\phi\acute{\epsilon}\rho\omega\nu$ , Lith. *dėgais* (burning), O. P. *sīdāns* (sitting), &c. In  $\nu$ -stems the nasal is sometimes thrown out and the preceding vowel lengthened, as in  $\tau\acute{\alpha}\lambda\acute{\alpha}\varsigma$  from  $\tau\alpha\lambda\alpha\nu$ ,  $\kappa\tau\acute{\epsilon}\iota\varsigma$  from  $\kappa\tau\epsilon\nu$ , &c., while in other cases the nasal is retained and the preceding vowel lengthened to compensate for the loss of  $\varsigma$ , as in  $\tau\acute{\epsilon}\rho\eta\nu$  from  $\tau\epsilon\rho\epsilon\nu$ ,  $\phi\rho\acute{\eta}\nu$  from  $\phi\rho\epsilon\nu$  (f.),  $\mu\acute{\epsilon}\iota\zeta\omega\nu$  from  $\mu\epsilon\iota\zeta\omicron\nu$ ,  $\chi\theta\acute{\omega}\nu$  from  $\chi\theta\omicron\nu$  (f.), &c. We often find a later nominative in  $\nu$  beside an older one in  $\varsigma$ , as  $\theta\acute{\iota}\nu$  beside  $\theta\acute{\iota}\varsigma$ ,  $\delta\epsilon\lambda\phi\acute{\iota}\nu$  beside  $\delta\epsilon\lambda\phi\acute{\iota}\varsigma$ , &c.  $\Sigma$  is lost after  $\rho$ , as in  $\chi\acute{\epsilon}\iota\rho$  from  $\chi\epsilon\rho$  (f.),  $\pi\alpha\tau\acute{\eta}\rho$  from  $\pi\alpha\tau\epsilon\rho$  (m.), &c.: whereas in Æolic both consonants are kept, as in  $\chi\acute{\epsilon}\rho\varsigma = \chi\acute{\epsilon}\iota\rho$ ,  $\mu\acute{\alpha}\kappa\alpha\rho\varsigma$ . In  $\mu\acute{\alpha}\rho\tau\upsilon\varsigma$  from  $\mu\alpha\rho\tau\upsilon\rho$ ,  $\rho$  appears to be lost before  $\varsigma$ . The solitary  $\lambda$ -stem ( $\acute{\alpha}\lambda\varsigma$ ) retains both  $\lambda$  and  $\varsigma$ . In  $\varsigma$ -stems  $\varsigma$  is lost, and the preceding vowel lengthened as in  $\delta\upsilon\sigma\mu\epsilon\nu\acute{\eta}\varsigma$  from  $\delta\upsilon\sigma\mu\epsilon\nu\epsilon\varsigma$ .

In vocalic stems  $\varsigma$  is simply added to stem, as in  $\acute{\alpha}\gamma\rho\acute{\omicron}\varsigma$  from  $\acute{\alpha}\gamma\rho\omicron$  (m.),  $\tau\alpha\mu\acute{\iota}\alpha\varsigma$  from  $\tau\alpha\mu\acute{\iota}\alpha$  (m.),  $\pi\acute{o}\lambda\iota\varsigma$  from  $\pi\omicron\lambda\iota$  (f.),  $\acute{\iota}\delta\rho\iota\varsigma$  from  $\acute{\iota}\delta\rho\iota$ ,  $\beta\omicron\eta\tau\acute{\upsilon}\varsigma$  from  $\beta\omicron\eta\tau\upsilon$  (f.), &c.  $\Sigma$  is lost in feminine stems in  $\acute{\alpha}$  ( $\eta$ ) as  $\chi\acute{\omega}\rho\alpha$ ,  $\kappa\omicron\rho\eta$ , &c., and in the Homeric forms,  $\acute{\iota}\pi\pi\acute{\omicron}\tau\acute{\alpha}$  (m.) for  $\acute{\iota}\pi\pi\acute{\omicron}\tau\eta\varsigma$ ,  $\alpha\acute{\iota}\chi\mu\eta\tau\acute{\alpha}$  (m.) for  $\alpha\acute{\iota}\chi\mu\eta\tau\eta\varsigma$ , &c.

III. *Latin Nom. Sing.* In guttural and labial stems  $s$  is simply added to the stem, as in *vox*, *halex*, *lex*, *auceps*, *urbs*, &c., from the stems *voc* (f.), *halec* (f.), *leg* (f.), *aucup* (m.), *urb* (f.), &c. In the case of adjectival stems this  $s$  is also retained in the neuter nom., as *audax* (m. f. n.), *ferox* (m. f. n.),

&c. : *atriplex* (the orach) is also neuter, and *halec* (n.) is a side-form of *halex* (f.) In dental stems *t* and *d* disappear before *s*, and the preceding vowel was originally lengthened in compensation; this lengthening is only found in Classical Latin, in monosyllables, and where the preceding syllable ends in *i*, as in *pēs* = *pēd* + *s*, *vās* = *vād* + *s*, *ariēs* = *ariēt* + *s*, *pariēs* = *pariēt* + *s*, *abiēs* = *abiēt* + *s*; in other cases the vowel has become short as in *milēs* = *milet* + *s*, *pedēs* = *pedet* + *s*, &c. Participial stems in *-nt* only reject *t*, as in *amans* = *amant* + *s*, &c. In Old Latin and in the vulgar dialect we find *n* also lost in *infas*, *sapiēs*, &c. for *infans*, *sapiens*, &c. : compare Gr. *τύψας* for *τυψαντ* + *ς*. In these stems in *-nt* *s* is also retained in the neuter nom. as *sapiens* (m. f. n.), &c. In *s*-stems *s* is lost, and the preceding vowel, although originally lengthened as in Greek, is generally short in Classical Latin. Traces, however, of its having been originally lengthened still remain, as in *Cerēs* (f.) from St. *Cerēs*, *arbūs* (f.) from St. *arbōs*, &c. In the declension of these stems the final *s* became *r* in the oblique cases, except in *vas*; and in the case of masculine and feminine nouns this *r* often supplanted the final *s* of the nominative, especially in later Latin; thus we have *puber* (m.) beside *pubes*, *arbor* (f.) beside *arbōs*, *sudor* (m.) for *sudōs* = Gr. *ἰδρώς*, *honor* (m.) beside *honos*, *vomer* (m. a ploughshare) beside *vomis* (m.), *lepor* (m. wit) beside *lepos* from St. *lepōs* (gen. sing. *lepōr-is*) &c. The nom. sing. ends in *-us* in *lepus* (m. a hare), from St. *lepōs*, and in *vetus* (m. old) beside *veter* (m. id.) used by Ennius. Neuter stems in *-os* retain the final *s* in nom. sing., yet we find *robur* (n.) = Skr. *rādhas* (n. strength) and *calor* used as a neuter in Plautus Merc. 660, *nec calor nec frigus metuo*. Masculine and feminine stems in *-n* lose the final *-ns* in the nom. : thus we have *homo* for *homōns*, *combibo* (m.) for *combibōns*, &c. In some cases *n* is retained, as in *pecten* (m.), *flamen* (m.), &c., and in *sanguis* for *sanguins*, *s* is kept and *n* lost. *S* is always lost after *r* and *l*, but the preceding vowel was originally lengthened in compensation as in Greek : thus we have *lector* (m.) for

*lector* + *s*, *mater* (f.) for *mater* + *s*, *sol* (m.) for *sol* + *s*, *pār* (m.) for *pār* + *s*, *sāl* (m.) for *sāl* + *s*, &c.

In the *i*- and *u*-stems *s* is kept, as in *amni-s* (m.) *fructu-s* (m.), &c. In stems ending in *-ti*, *i* is frequently lost before *s*, as in *mens* (f.) for *ment* + *s* = *menti* + *s*, *mors* (f.) for *mort* + *s* = *morti* + *s*, *vetustas* (f.) for *vetustat* + *s* = *vetustati* + *s*, *senectus* (f.) for *senectut* + *s* = *senectuti* + *s*, &c. After *r* and *l*, *i* was lost in masculine stems and *e* was inserted before *r*, when another consonant immediately preceded, as *acer* for *acri* + *s*, *equester* for *equestri* + *s*, &c.: the full form is kept in the fem. nom. *acris*, *equestris*, &c. Similarly we have *vigil* for and beside *vigilis*. In neuter stems *i* was sometimes lost and sometimes changed into *e*, as in *animal*, *calcar*, &c., and *mare*, *exemplare* (also *exemplar*), &c. Stems ending in *-o* also retain *s*, as *servo-s* (m.), *equo-s* (m.), &c., except when *r* precedes, in which case *-os* (*-us*) is often lost, as in *ager* for *agro* + *s*, *puer* for *puero* + *s*, &c. *O* (*u*) was sometimes lost after *t*, and then *t* disappeared, as in *damnas* for *damnato-s*; similarly we find O. U. *pihaz*, N. U. *pihos* = L. *piatus*, O. O. *hürz* = L. *hortus*, N. U. *taçez* = L. *tacitus*. After *i* *o* was sometimes lost, as in *Cornelis* for *Cornelius*, *Clodis* for *Clodius*, &c., and then *s* sometimes disappears, as in *Corneli*, &c., which occur as nom. s. on inscriptions: similarly in Oscan we find *Heirennis* for *Herennius*, in which *u* first became *i* or *i* (as in *Püpidiis* = L. *Popidius*, *Viinikiis* = L. *Vinicius*) and then *i* or *ii* became *i*. We also find *o* (*u*) lost after *n* in Umbrian, as in *Ikuvin*s = L. *Iguvinus*, and in Oscan, as in *Bantins* = L. *Bantinus*, *Pimpaiians* = L. *Pompeianus*. *O* is lost after *k* in O. U. *tivtik*s = L. *tuticus*. Feminine stems in *-ā* have entirely lost *s*, and *-ā* has become *-ā* in Classical Latin: Bücheler suggests that the change of final *-ā* of nom. sing. into *-ā* was contemporaneous with that of final *-ād* of abl. sing. into *-ā*. In Old Umbrian this *ā* sometimes became *u*, and in New Umbrian it always became *o*, as in O. U. *tuta*, *tutu*, N. U. *toto* = *tuta* (a city); similarly in Old Oscan it became *u*, and in New Oscan

o, as in O. O. *vīu* = L. *via*, O. O. *tīvtu*, N. O. *toṽto* = *tuta*. Masculine stems in *-a*, such as *incola*, *nauta*, &c., have also lost *s*, but that they once had it is shown by the forms *paricidas*, *hasticapas* (see page 246).

## §. 129. THE NOMINATIVE PLURAL.

The sign of the nom. pl. appears to have been originally the reduplication of that of the nom. sing. Its oldest form, accordingly, must have been *-sasa*, whence came firstly *-sas* and then *-as*. *Sas*, as the sign of the nom. pl., occurs in Vedic Sanskrit in the declension of the *a*-stems: thus we have, as nom. pl. *dhûmâ-sas* from *dhûma* (m. 'smoke'), *dêvâ-sas* from *dêva* (m. a god), *pâvakâ-sas* from *pâvakâ* (f. pure). Traces of this *-sas* also appear in Zend, in which such forms of the nom. pl. as *vêhrkâonhô* (m. wolves) = I. E. *varkâ-sas*, &c., point back to older forms in *-sas*. The nom. pl. neuter is the same as the acc. pl. neuter.

I. *Sanskrit Nom. Pl.* Masculine and feminine stems form this case always in *-as*, before which *ī* and *ū* are gunated; thus we have *marut-as* from *marut* (m. the wind), *mâtar-as* from *mâtar* (f. a mother), *nâdy-as* from *nâdī* (f. a river), *śivâs* for *śiva* + *as* from *śiva* (m. fortunate) or for *śivâ* + *as* (f. id.), *kavay-as* from *kavi* (m. a wise man), *dhēnav-as* from *dhēnu* (f. a milch cow). In the Veda we find nom. s. of stems in *-ī* and *-ū* without gunation of these vowels, as *ary-as* from *ari* (m. an enemy), *mumukshv-as* from *mumukshu* (m. a sage abstracted from all human passion). In Vedic we also find nom. pl. of polysyllabic *i*-stems formed by simply adding *s* to the stem, as *dēvī-s* from *dēvī* (f. a goddess).

II. *Greek Nom. Pl.* Masculine and feminine stems form this case by adding *-ες* to the stem; thus we have *φλέβ-ες* from *φλέβ* (f. a vein), *ποιμέν-ες* from *ποιμήν* (m.), *πατέρ-ες* from *πατερ* (m.), *ιχθύ-ες* from *ιχθυ* (m.), *κί-ες* from *κι* (m. a worm).

Stems ending in *ι* and *υ* may either gunate the final vowel or not, before adding *-εσ*: thus we have as examples of *-εσ* being added to unchanged stem, *μάντι-εσ* from *μαντι* (m.), *οἷ-εσ* from *οἰ* (m. f.), *ἰδρι-εσ* from *ιδρι* (m. f.), *νέκυ-εσ* from *νεκυ* (m.), &c.; and as examples of gunated stems we have, *πόλεις*, *πόλῃες*, *πόλλεις* = *πολεϋ-εσ* from *πολει*, the gunated form of *πολι* (f. a city), whence also we have without gunation, Ion. *πόλι-εσ*, *πολεῖς* = *πολεF-εσ* from *πολεϋ*, the gunated form of *πολυ*, *ταχεῖς* = *ταχέες* = *ταχεF-εσ* from *ταχυ*, *ἐγγέλεις* = *ἐγγελεF-εσ* from *ἐγγελυ* (f.) beside Ion. *ἐγγέλυ-εσ*, &c. Masculine and feminine stems in *ο* and *α* (= Skr. *ā*) form their nom. pl. in *-οι* and *-αι*, as *ἵπποι* from *ἵππο* (m.), and *χωραί* from *χωρα* (f.) These forms originally ended in *ς* and were not developed till after the Greek and Latin languages separated from each other. The loss of the final *ς* may have occurred first in the nom. pl. of the pronominal stems *ὁ* or *το*, *ᾱ* or *τᾱ*. Schleicher suggests that *τοί* (= *οἱ*), and *ταί* (= *αἱ*) may have arisen from *ta-y-as* and *tā-y-ās*, the pronominal stems *ta* and *tā* having been increased by *y* (*i*) before the addition of *-as*, and that *tayas* and *tāyas* became *tai* and *tāi* by the loss of the final syllable. In Sanskrit we find *s* lost only in the nom. pl. masc. of some pronominal stems, while the fem. retains *s*: thus *yé* (m.), beside *yās* (f.) from *ya* (who), *té* (m.), beside *tās* (f.) from *ta* (he, she), *tyé* (m.), beside *tyās* (f.), from *tya* (this), &c. This similarity between the nom. pl. masc. of the pronouns in Sanskrit and Greek is not sufficient to prove that these nominatives were already developed in Indo-European times. All that can be asserted is that it is just possible that the final *s* of the nom. pl. was lost in some pronouns before the first separation occurred in the Indo-European family of languages.

III. *Latin Nom. Pl.* Masculine and feminine consonantal stems originally formed this case by the addition of *-ēs* = Gr. *ῆς*. Final *s* was frequently lost in Old Latin, as we see from Inscriptions, on which we find such forms as *Pisaurēse* for

*Pisaurenses*. Even *ŕ* itself was also lost, so that the nom. pl. was reduced to the mere stem, as in U. *frater* (fratres), O. *censtur* (censores), L. *quattuor* for *quattuor-es*, *Luceres* for *Lucerenses*, *Tities* for *Titienses*, *Ramnes* for *Ramnenses*. Consonantal stems, however, perhaps during the third century, B.C. ceased to form their nom. pl. by the addition of *-ēs*, but, assuming the form of the *i*-stems, formed this case by adding *-ēs*, as in *leg-ēs*, *bov-ēs*, *ferent-ēs*. The nom. pl. of the *i*-stems ends in *-ēs*, as *ovēs* from *ovi*, *hostēs* from *hosti*, &c.: *ē* here may be explained in either of two ways, either as being for *ie* (*ovēs* = *ovi* + *ēs*, as *πόλι-ες* from *πολι*, without gunation of stem-vowel) or as being for *ēē* (*ovēs* = *ovēēs* = *ovey* + *ēs* as *πόλεις* for *ποley* + *ες* from *πολι*, with gunation of stem-vowel). *I*-stems also form their nom. pl. in *-eis* and *-īs*, which are probably of later formation than *-ēs*, although some writers hold that *-īs* (= *-iīs* = *-iēs*) was the oldest form. The nom. pl. of the *u*-stems ends in *-ūs*, as *fructūs* from *fructu*: *fructūs* may either be for *fructu* + *ēs* (as *νέκυες* from *νεκυ*, without gunation of stem-vowel) or for *fructov-es* (as *πήχεις* = *πηχεF-ες* from *πηχυ*, with gunation of stem-vowel). The nom. pl. of the *a*-stems ends in *-ai*, the original termination was *-ās*, as may be inferred from the O. U. *urtas* = L. *ortæ*, N. U. *ivengar* = L. *juvencæ*, N. O. *scriptas* = L. *scriptæ*, N. O. *pas* = L. *quæ*. Final *s* was then lost, as we see from inscriptions, on which we find as nom. pl. *matrona*, &c., and then after the analogy of the pronominal declension, *i* was added, and the nom. pl. of these stems ended in *-ai*, as in *tabelai*, *datai* (Sc. de Bacc.), which finally became *ae*. In Classical Latin the nom. pl. of the *o*-stem ends in *-ī*, but originally *-es* was attached immediately to the stem, so that the original termination was *-oes*. This termination appears in various forms: thus we find as nom. pl. *pilumnoe poploe* (in Carmen Saliare, explained by Festus as *Romani pilis uti assueti*), *fesceninæ* (qui depellere fascinum credebantur), *modies*, *ques*, *ploirumē*, *leibereis*, *oinvorsei*, *ministrits*, &c. Final *s* is retained in Oscan and Umbrian: thus we

have O. O. *Nivlanis* = L. *Nolani*, *pūtīrūs* = Gr. *πότεροι*, O. U. *Ikuvinus*, N. U. *scēitor* = L. *scripti*, &c. In Latin *s*-stems *s* is kept as in *diēs*, &c., but in some cases the pl. is formed from a corresponding *a*-stem, as nom. sing. *intemperies* or *intemperia*, nom. pl. *intemperiae*.

### §. 130. THE NOMINATIVE DUAL.

The original termination of the masculine and feminine nominative dual was *-sās*, which was merely the lengthened form of the nom. pl. *-sas*; similarly *ī*, the case-ending of the nom. dual neuter, is the lengthened form of *-ī*, the case-ending of the nom. pl. neuter, and *-bhyām* (for *-bhyāms*), the case-ending of the dat. abl. and instr. dual, is the lengthened form of *-bhyas* (for *-bhyams*), the case-ending of the dat. and abl. pl. As *-sas* became *-as*, so *-sās* became *-ās*. That the dual nom. ended in *-ās* is proved by the Zend. nom. dual, which sometimes ends in *-āo*, which represents an I. E. *-ās*. The nom. acc. and voc. dual have the same case-ending.

I. *Sanskrit Nom. Dual.* Masculine and feminine stems form this case by the addition of *āu*, as *marut-āu* from *marut* (m.), *nady-āu* from *nadi* (f.), *s'ivāu* from *s'iva* (m.), &c. In Vedic we find *ā* for *āu*, as in *ubhā* (both), *as'vinā* (the two *As'vins*), &c. Masculine and feminine stems in *-ī* and *-ū* omit *-āu*, and in compensation lengthen the final vowel, as in *kavi* from *kavī* (m.), *dhēnū* from *dhēnū* (f.). Feminine stems in *-ā* merely change this vowel into *-ē*, as in *s'ivē* from *s'ivā* (f.). Bopp\* considers that the original form of *s'ivē* was *s'ivay-āu* and that, when the final *u* had been lost, *s'ivayā* became *s'ivē*, as Skr. *kintayāmi* (I think), has become *kintēmi* in Prākṛit. The nom. neuter is formed by adding *-ī* to the stem as *s'ivē* for *s'iva* + *ī* from *s'iva* (n.), *vāri-n-ī* from *vāri* (n. water),

\* Consult Bopp's "Comparative Grammar," vol. I., p. 418, and Bopp's "Sanskrit Grammar," p. 98.

*balint* from *balin* (n. strong) : stems ending in *-i* and *ũ* insert *n* before *-i*.

II. *Greek Nom. Dual*. The sign of this case for the three genders is *ε* for all stems except those ending in *-a* (o, a) : thus we have *μέλανε* (m. n.) from *μελαν*, *ἡδέε* (m. n.) = *ἡδεε* from *ἡδν*, *πόλιε* from *πολι* (f.) beside *πόλεε* and *πόληε* = *πολεε*, &c. In the *a*-stems the dual case-ending coalesces with the stem-vowel : thus we have *ἵππω* from *ἵππο* (m.), *κόρα* from *κορά* (f.), &c.

III. *Latin Nom. Dual*. There are only two dual nom. s. in Latin, *duō* and *ambo* : *duō* = Skr. *dvāu* = Gr. *δύω*, *ambo* = Skr. *ubhāu* = Gr. *ἄμφω*.

### §. 131. THE ACCUSATIVE SINGULAR.

This case in all masculine and feminine nouns ended in *-m*, which was attached immediately to the stem if it ended in a vowel, or by means of *-a* if it ended in a consonant. In the *a*-stems the neuter acc. sing. was formed by adding *-m*, but in all other neuters the stem and the acc. sing. were identical. The acc. sign. *-m* or *-am* is perhaps connected with the pronominal root which is found in Skr. *am-u* (that), *i-mē* (those), &c.

I. *Sanskrit Acc. Sing.* Masculine and feminine consonantal stems add *-am*, as *marut-am* (m.), *bharant-am* (m.), *pitar-am* (m.), &c. The acc. sing. neut. is merely the stem itself, subject to the euphonic laws of Sanskrit, as *bharat* (n.) from St. *bharant*, *hṛt* (n.) from St. *hṛd*, &c. Vocalic stems add *-m*, as *s'iva-m* (m.), *s'ivā-m* (f.), *kavi-m* (m.), *nadī-m* (f.), &c. Monosyllabic vocalic stems, however, except those in *-ō*, add *-am*, as *nāv-am* from *nāu* (f.), *bhiy-am* from *bhī* (f. fear), *bhuv-am* from *bhū* (f. the earth), &c. The acc. sing. neut. of stems in *-i* and *-u* is merely the stem, but in the *a*-stems *m* is added, as in *s'iva-m* from *s'iva* (n.). The nom. sing. neut. and the acc. sing. neuter are the same.

II. *Greek Acc. Sing.* Masculine and feminine consonantal stems add *-a* for *-av* = I. E. *-am*, as in *λαμπάδ-a* (f.), *φέρουν-a* (m.), *πατέρ-a* (m.), &c. Masculine and feminine vocalic stems, except those ending in *ευ*, add *-ν*, as *μάντι-ν* (m.), *νέκυ-ν* (m.) *ἀγρό-ν* (m.), *φυγή-ν* (f.), &c. : those in *-ευ* add *-a*, as *βασιλῆ-a* and *βασιλέ-a* = *βασιλεF-a* (m.), *ιερχῆa* and *ιερέ-a* = *ιερεF-a* (m.). Beside *ναῦ-ν* (f.) we find Hom. *νηF-a* and *νέF-a* : beside *ὀφρύ-ν* (f.), we find the later form *ὀφρύ-a* ; from *εὐρυ* we have both *εὐρύ-ν* and *εὐρέ-a* = *εὐρεF-a*, &c. In consonantal stems and those ending in *-ι* and *-ν*, the acc. neuter is merely the stem, subject to the euphonic laws of the Greek language, while in *o*-stems it ends in *-ν* ; thus we have *τέρας* (n.), for *τερας*, *φέρον* (n.) for *φεροντ*, *μέλι* (n.) for *μελιτ*, *ἴδρι* (n.), *γλυκύ* (n.), *σοφό-ν* (n.), &c. Stems ending in *-ιο* (= I. E. *-ya*) sometimes lose *o* in later Greek, as in *μάρτυρι-ν* for *μαρτύριο-ν*, &c. ; similarly in Umbrian we find *terti-m* = *tertio-m*, &c., and in modern Greek *παιδί* for *παιδιν* = *παιδίον*, *μάρτι* for *μαρτιν* = *μάρτιον*, &c.

III. *Latin Acc. Sing.* Masculine and feminine consonantal stems form this case in *-em*, thus agreeing in form with the *i*-stems : thus we have *voc-em* (f.), *ferent-em* (m. f.), *patr-em*, &c. This *-em* does not represent an I. E. *-am*, as has been suggested by some writers, but the consonantal stems were lengthened by *i*, which became *e* before the acc. sing. *-m*. Masculine and feminine vocalic stems add *-m*, as *fructu-m*, (m.), *bona-m* (f.), *bono-m* (m.), &c. In the *i*-stems the stem-vowel generally becomes *e*, as this vowel is more easily pronounced with *m* than *i* ; but we nevertheless find *i* retained in many feminine stems, as *febri-m*, *siti-m*, *tussi-m*, *Tiberi-m*, *vi-m*, *navi-m* (also *nave-m*), &c. The acc. s sing. of *su-s* (f.) and *gru-s* (f.) are *su-em* (compare Gr. *σῦ-ν* and *ῦ-ν*) and *gru-em*. In neuter stems the acc. sing. is merely the stem, subject to the euphonic laws of Latin : thus we have *lac* for *lact*, *mel* for *mell* = *melt*, *cor* for *cord*, *mare* for *mari*, *nomen*, &c. In some cases the acc. sing. neuter agrees with the nom. sing.

masc., as in such forms as *feren-s* for *ferent-s*, *audac-s*, &c. In Umbrian and Oscan the acc. sing. ends in *-m*, as in Latin, and this *m* very often disappears, as in Old Latin: thus in Umbrian we have O. U. *puplum* = N. U. *poplom* = L. *populum*; O. U. *tutam* = N. U. *totam*, N. U. *Fisim* = *Fisiom*, N. U. *tertim* = L. *tertiom*, &c.; and in Oscan, O. O. *hurtum* = L. *hortum*, *viam* and *via* = L. *viam*, &c. Consonantal stems in Umbrian do not go over to the *i*-declension, as in Latin, but form their acc. in *-um* or *-u*, and *-om* or *-o*, as O. U. *ūhtūru* = L. *auctorem*, N. U. *curnaco* = L. *cornicem*, &c.

### §. 132. THE ACCUSATIVE PLURAL.

The accusative plural of masc. and fem. stems appears to have been formed by adding *s* to the acc. singular; its ending was, therefore, originally *-ns* (= *-ms*), the labial *m* becoming the dental *n* on account of the following dental *s*. Traces of this *-ns* are found in Sanskrit, Zend, Greek, and Latin; but it is kept perfect in Gothic vocalic stems, for the euphonic laws of this language did not forbid such a combination as *ns*, occurring at the end of a word. The acc. pl. neuter and the nom. pl. neuter were formed by adding *-a* to the stem.

I. *Sanskrit Acc. Pl.* Masculine and feminine consonantal and monosyllabic vocalic stems form this case by adding *-as* to the stem, as *marut-as* from *marut*, *bhiy-as* (f.) from *bhî*, &c. Masculine vocalic stems, ending in a short vowel, form their acc. sing. by adding *n*, and lengthening the stem-vowel: thus we have *s'ivān* = *s'iva-ns* from *s'iva* (m.), *kavīn* = *kavi-ns* from *kavi* (m.), &c. The acc. pl. of masc. stems in *-tar* ends in *tīn*, as *pi-tīn*, &c.; but an older termination was *-tar-as*, as in Vedic *pitar-as* from *pitar*. Feminine vocalic stems form their acc. pl. by adding *s*, and lengthening the stem-vowel, when it is short, as in *gattis* = *gati-ns* from *gati* (f. motion), *s'ivās* = *s'ivā-ns* from *sivā* (f.), &c. We find traces of the termination *-ns* still appearing in Sanskrit, as in *kāns*, the acc.

pl. of *ka* (m. who), which occurs only before *kân*, the regular form : thus *kâns kan* = O. Pr. *kans kans*, compare Gothic acc. pl. *hvans*, found in *hvans-uh* (quoscunque).<sup>\*</sup> In Vedic also masc. stems in *-i* and *-u* form their acc. pl. in *-îñ\**, *-ûñr†* before vowels, and occasionally before *y*, *v*, and *h*, as in *girîñr* from *giri* (m. a mountain), *ṛtûñr* from *ṛtu* (m. a season), *vasûñr* from *vasu* (m.); we also find in Vedic *nîñh* and *nîñr* as the acc. pl. of *nar* (m. a man): in these cases *-ñr* and *-ñh* represent an original *-ns*; compare the Gothic acc. s pl. *gasti-ns*, *sunu-ns* from *gasti* and *sunu*, and Z. *nēr-a-ns*. Neuter vocalic stems form the acc. pl. by lengthening the stem-vowel, and adding *ni*; neuter consonantal stems add *i*, and insert *n* before the final consonant, except in the case of stems ending in a nasal, or *y*, *r*, *l*, and *v*: thus we have *s'ivâ-ni* from *s'iva* (n.), *vârî-ni* from *vari* (n. water), *tâlû-ni* from *tâlu* (n. the palate), *g'aganti* from *g'agat* (n. the world), *hṛndi* from *hṛd* (n. the heart), &c. Stems ending in *-s* or *-n* also lengthen the preceding vowel, as in *manânsi* from *manas* (n. the mind), *balîni* from *balin* (n. strong), &c. This final *i* is probably a weakened form of an older *a*, and was obviously introduced in Sanskrit after the other Indo-European languages had separated from the parent stock. In the Vedas we find for the acc. pl. terminations *-âni*, *-îni*, and *-ûni*, *-â*, *-î*, and *-û*, as in *vanâ* for *vanâni* from *vana* (n. a wood), *vis'vâ* for *vis'vâni* from *vis'va* (n. all), *vârî* for *vârîni* from *vâri* (n. water), *purû* for *purûni* from *puru* (n. much).<sup>‡</sup> *Vanâ* and *vis'vâ* are formations similar to Gr. *kaká* and L. *bona*, where the final *a* was originally long; but in *purû* for *puru-a*, and *vârî* for *vârî-a*, the final *a* has been assimilated to the preceding vowels, whereas in Greek and Latin this is never done, as in Gr. *ἰδρία*, *yoûva* for *yoova*, L. *maria*, *pecua*.

II. *Greek Acc. Pl.* This case was formed by adding *ς* to

\* Consult Bopp's "Sanskrit Grammar," p. 97.

† The sound of the Anunâsika is represented by *ñ*.

‡ We also find in Vedic as acc. s pl. *madhu*, *vârî*.

the acc. sing., but the full termination *-υς* was only kept in the Argive and Cretan dialects; when *υ* was lost, the preceding vowel was originally lengthened in compensation, traces of which still remain; thus we have *ιχθύ-ας* and *ιχθύς* = *ιχθύς* from *ιχθύ* (m.; compare acc. sing. *ιχθύα* and *ιχθύν*), *γλυκεῖς* = *γλυκεF-ας*, from *γλυκυ* (m.), *πόλεις* = *πολεγ-ας* beside *πόλι-ας*, *πόλη-ας*, and *πόλῖς* = *πολῖνς* from *πολί* (f.), &c. The full term *-υς* is found in Arg. and Cret. *τόνς* = *τους*, *πρεηγευτάνς* = *πρεσβευτάς*. In Lesbian *-ους* and *-ανς* became *-οις* and *-αις*, just as we find in the same dialect, *τάλαις* = *τάλανς* for *τάλας*, *κινήσαις* = *κινήσας* for *κινησαντίς*, &c.: thus we have *κάλαις* = *κάλας*, *σόφαις* = *σόφας*, *ἀλλάλοις* = *ἀλλήλους*, &c. In Doric *-ους* became *ως*, as *ἵππωνς* = *ἵππους*. The acc. pl. neuter is formed by adding *α* to the stem, as in *φέροντ-α*, *γέννη* = *γενεσ-α*, *ἰδρι-α*, *ἄστη* = *ἀστειF-α* from *ἀστν*, &c.

III. *Latin Acc. Pl.* In masculine and feminine stems this case always ends in *-s*, the vowel preceding which is always long, the consonantal stems, as usual, assuming the form of those in *-i*: thus we have *leg-ēs*, *ferent-ēs*, *patrēs*, *artūs* = *artun-s* from *artu* (m.), *turreis*, *turrīs*, and *turrēs* from *turri* (f.), *bono-s* from *bono* (m.), *bona-s* from *bona* (f.). With such forms as *turreis*, *fineis*, *tristeis*, compare Gr. *πόλεις*, and with *turrīs*, *ignīs*, *hostīs*, compare Gr. *πόλῖς*. The acc. pl. neuter is formed by adding *-a*, as *cornu-a*, *corpor-a* for *corpos-a*, *bona* for *bond* = *bona-a*, &c. Participial stems in *-nt* assume *i* before adding *a*, as *ferentia* from *ferent*, *amantia* from *amant*, &c.; yet *silentia* from *silent* occurs. In Oscan we find *-ss* for *-ns*, *n* being assimilated to *s*, as in *via-ss* = L. *vias* for *via-ns*, &c. In Umbrian the acc. pl. ends in *f*, as in O. U. *avēf*, *avīf*, N. U. *avīf*, *aveif* = L. *avēs*, *avīs*, *aveis*, O. U. *apruḡf*, N. U. *aproḡf* = L. *apros*, &c. No satisfactory explanation has as yet been suggested for this *f*: some writers consider it to be the remains of a postposition before which final *s* has disappeared, in which case *avef* would be for *aves-f*; others connect it with I. E. *-bhi*, which is used to form some other cases, but this expla-

nation is just as improbable as the preceding one. It is more likely that *f* arose merely from a provincial pronunciation of the original *s*, and *s* may have become *f* in Umbrian, just as *-as* passed through the stage *-af* in becoming *-ô* in Sanskrit (consult §. 34).

### §. 133. THE ACCUSATIVE DUAL.

This case has the same termination as the nom. dual.

I. *Sanskrit Acc. Dual.* The masc. and fem. acc. dual, being the same as the nom. dual, has been already noticed under that case. Neuters have as their ending *-î*, which is merely the lengthening of the nom. pl. neuter sign *-i*, as *balin-i* from *balin* (n. strong), *vâri-n-i* from *vâri* (n. water), *madhu-n-i* from *madhu* (n.), *s'ivê* = *s'iva* + *î* from *s'iva* (n.).

II. *Greek Acc. Dual.* This case has the same termination as the nom. dual. Greek differs from Sanskrit in having the same termination in the three genders, as *κόρακ-ε* from *κορακ* (m.), *φλέβ-ε* from *φλεβ* (f.), *σώματ-ε* from *σωμα* (n.), *λόγω* from *λογο* (m.), *νόσω* from *νοσο* (f.), *ξύλω* from *χυλο* (n.), &c.

III. *Latin Acc. Dual.* In *duo* and *ambo* the acc. masc. is either *duo* and *ambo*, or *duo-s* and *ambo-s*, following the analogy of the plural. The feminine is formed only as a plural, nom. *duæ*, *ambæ*, acc. *dua-s*, *amba-s*. In vulgar Latin *dua* was used for the neuter beside *duo*.

### §. 134. THE INSTRUMENTAL SINGULAR.

In Indo-European two forms of the instr. sing. existed, one ending in *-â*, and another in *-bhi*. Now, as the instrumental has two meanings, the one *comitative*, and the other *instrumental proper*,\* it is likely that each of the above terminations was limited to one special meaning, although finally this limitation was lost. The termination *-â* is perhaps con-

\* So E. *with* has both these meanings, as in "I went with him," and "I cut the bread with a knife." See Schleicher, "Compendium," &c. p. 577.

nected with the pronominal root *a*, of which it is the guna: *bhi* has been connected by some writers with the preposition Skr. *abhi* = Gr. ἀμφί; but then how is *abhi* itself to be explained? It is generally supposed to be the instrumental of the pronominal root *a*. Besides, if *bhi* be of prepositional origin, how are the terminations *-bhy-as*, *bhy-ām*, to be accounted for? Such forms as Skr. *vâg-bhy-as* cannot be compared to such as L. *vobiscum*, for in the latter the preposition comes last; they would rather require *vo-cum-bis* as a parallel case. Curtius\* suggests that *-bhi* is connected with the root *bhu* (to be); from *bhu* was formed the nominal stem *bhu-ya*, whence came *bhya*, and finally *bhi*. *Bhuya* and consequently *bhi* in this view meant *existence*, and being added to another nominal stem expressed coexistence; hence we have the *comitative instrumental*.

I. *Sanskrit Instr. Sing.* In consonantal stems and feminine ones ending in *-i*, *-î*, *-u*, and *-û*, this case is formed by simply adding *-â*, as in *vâk'-â* from *vâk'* (f.), *marut-â* from *marut* (m.), *nady-â* from *nadi* (f.), *dhênu-â* from *dhênu* (f.), &c. Feminine stems in *-â* alter the stem-vowel to *-ê* before adding *-â*; hence we have *s'ivay-â* from *s'ivâ*, &c. In Vedic, however, we find such forms as *dhârâ* (= *dhârâ-â*) for *dhâray-â* from *dhârâ* (f. a shower), &c. Masculine and neuter stems ending in *-i* and *-u* insert *n*, as in *bhânunâ* from *bhânu* (m. the sun), *vâriṇâ* from *vâri* (n. water), &c. In the Vedas we find other forms of this case without *n*, as *paśvâ* from *paśu* (m. cattle), *madhvâ* from *madhu* (n. honey); also with guna, as *prabâhavâ* from *prabâhu* from *bâhu* (m. the arm); and also with euphonic *y*, as *uruyâ* from *uru* (great). Even in later Sanskrit we find *patyâ* from *pati* (m. a master), and *sakhyaâ*

\* Consult Curtius "zur Chronologie," &c., p. 257. *Bhi* appears to be connected with other suffixes beginning with *bh*, as Skr. *-bha* = Gr. *-pho* in *karabha-s*, *karam-bha-s*, Gr. *ἱλα-φο-ς*, *στίρι-φο-ς*, &c. As Curtius connects *bhi* with R. *bhu*, so he connects the Greek suffixes *-θα*, *-θι*, *-θειν*, with the I. E. *dha* (to place), whence perhaps also the suffix *-θο* in *μισ-θός* (from R. *μηδ*), &c.

from *sakhi* (m. a friend). Masculine and neuter stems in *-a* also insert *n*, but change the stem-vowel into *é*, and shorten the final *á*, as *s'ivéna* from *s'iva* (m. n.), &c. In the Vedas we find the final *á* sometimes retained, as in *kulis'éná* from *kulis'a* (m. n. an axe); also without the euphonic *n*, as *mahitvá* from *mahitva* (n. greatness); and also with an euphonic *y*, as *svap-nayá* from *svapna* (m. sleep).

The other instrumental termination, *-bhi*, does not occur in Sanskrit, unless the preposition *abhi* be the instr. of the pronominal root *a*. It is, however, much more probable that *abhi* was originally a locative, meaning "on both sides of;" compare Skr. *abhtas*, which still retains this sense.

II. *Greek Instr. Sing.* The form ending in *-á* appears probably in the adverbial forms, *ἄμα*, Dor. *ἀμα*, *δίχα*, Dor. *διχᾶ*, *ράχα*, *πῆ*, *φῆ* (found in Il. 2, 144; 14, 499, perhaps for *σφη* = Goth. *své*, as), *ἀλλαχῆ*, *δή* (for *dyá* = *yá*, from pronominal stem *ya*, whence we have the locative form in L. *jam*), *πάντη*, Dor. *παντᾶ*, &c. "*Iva* may be the instr. of pronominal stem *i* = I. E. *ya*, with *v* inserted, as in *τινός* from *τί-ς*.

The other instrumental ending, *-φι*, is used also in an ablative and locative signification. It is an instrumental proper in *βίηφι*, *ἦφι*, &c.; and comitative in (*ξύν*) *ὄχεσφι*, (*ἄμφοι*) *φαινόμενῃφι*, &c.

III. *Latin Instr. Sing.* Neither form of the instr. is found in Latin or any other Italic language.

### §. 135. THE INSTRUMENTAL PLURAL.

In Indo-European this case ended in *-bhis*, the plural form of the sing *-bhi*.

I. *Sanskrit Instr. Pl.* *Mamudbhis* from *marut* (m.), *kavibhis* from *kavi* (m.), *s'ivábhis* from *s'ivá* (f.), &c. Masculine and neuter stems in *-a* change the stem-vowel into *é* in Vedic, as in *as'ébhis* from *as'va* (m.); whereas in ordinary Sanskrit *a* becomes *á*, and *bh* is thrown out, as in *s'iváis* from *s'iva* (m. n.). The oldest form of the instr. of the *á*-stems ended in

-*ābhis*, as we see from the pronominal instr. forms *asmābhis* and *yushmābhis*, from *asma* and *yushma*. The Prākṛit instr. pl. of the *ā*-stems ends in -*ēhin* = Ved. -*ēbhis*, as in *kusumēhin* = Ved. *kusumēbhis* beside Skr. *kusumāis* from *kusuma* (n. a flower). In Old Persian this case in these stems ends in -*aibhish* = Ved. -*ēbhis*.

II. *Greek Instr. Pl.* The final *ς* was lost, and consequently the form of the instr. pl. is the same as that of the instr. sing.; i. e. -*φι* or -*φιν*, as in *ναῦφιν* (II. 2, 794). The form -*φιν* probably belonged originally to the dual, and corresponded to Skr. -*bhyām*.

III. *Latin Instr. Pl.* There is no trace of this case in Latin or the other Italic languages. •

### §. 136. THE INSTRUMENTAL DUAL.

See the section on the dative plural, which is identical in form with this case.

### §. 137. THE DATIVE SINGULAR.

In Indo-European this case was formed by adding -*ai* to the stem. The origin of this termination is very doubtful. Some writers consider it to be the guna of the locative termination -*i*; others derive it from the preposition *abhi*, *bh* being lost, as in Skr. *s'ivāis*, instr. pl. of *s'iva* (m. n.), &c., and in Lith. *vilkais* (for *vilkamis*) instr. pl. of *vilka*, &c., and as *φ* is lost in Doric *ἐμίν* = Skr. *mahyam* for *mabhyam*, and Homeric *τεῖν* = Skr. *tubhyam*. *Bh* also appears in these pronominal datives; and as the pronouns generally preserve more archaic forms than the noun, it is likely that here also they point back to the oldest form of the dative. We may compare with this use of *abhi* to form the dative the use of the Latin preposition *ad* to express the dative idea in the expression *te ad carnuficem dabo*, which occurs in Plautus. Bopp identifies *ē*, the termination of the Sanskrit dative, with the demonstrative stem *ē*, whence *ay-am* = *ē* + *am*, and which *ē* he considers to be only another form of the stem *ā*.

I. *Sanskrit Dative Sing.* The dative of the consonantal stems is formed by the addition of *-ê*, as *marut-ê* from *marut*, &c. Polysyllabic feminine stems in *-î* and *-û* form the dative by adding *âi*, while monosyllabic feminines in *-î* and *-û*, and all feminines in *-i* and *-u* may form this case in either *-ê* or *-âi*. All masculine and feminine stems in *-i* and *-u* gunate the final vowel before *-ê*, as *gatay-ê* from *gati* (f. motion), *bhânav-ê* from *bhânu* (m. the sun), &c. Neuter stems in *-i* and *-u* insert *n*, as *vâri-n-ê* from *vâri*, &c. Masculines and neuters in *-ã* add *-aya*, as *sivâya* from *sivã*, &c., while feminines in *-ã* add *-yâi*, as *sivâyâi* from *sivã*, &c.

II. *Greek Dative Sing.* The true dative termination in Greek is only found in stems ending in *-a* (*a*, *η*, *ο*): thus we have *οἶκος* = *οικο* + *οι*, *θεῖα* = *θεα* + *αι*, &c. In other stems the locative is used as the dative.

It is a disputed question whether Greek infinitives in *-αι*, *-μεναι*, *-εναι*, *-ναι*, are datives of consonantal stems, or locatives of feminine stems in *-ã*. In favour of the first view we have the analogy of the Sanskrit, in which datives are used as infinitives; and in favour of the second view we have the fact that no Greek dative ends in *-αι*, whereas this termination is found in *χαμαί*, loc. of St. *χαμα*. Thus *λῦσαι*, *τεθνάμεναι*, *λελοιπέναι*, *δεικνύναι*, may be either datives of the stems *λυ-ς*, *τεθνα-μεν*, *λελοιπ-εν*, *δεικ-νυ-ν*, or locatives of the stems *λυ-σα*, *τεθνα-μενα*, *λελοιπ-ενα*, *δεικ-νυ-να*. The infinitive in *-σθαι* is either the dative of a feminine stem in *-i*, corresponding to the Sanskrit dative of stems in *-dhi*, which is used as an infinitive, as *piba-dhyâi* (to drink, Rigg. 4, 27, 5), or it has assumed the termination *-αι*, following the analogy of other infinitives.

III. *Latin Dative Sing.* The dative of cons. stems ends in *-î*, which probably represents the I. E. *-ai*. In the fifth century A. U. C. the termination of this case was *-ê*, as in the Umbrian forms *nomn-e* = Skr. *nâmn-ê*, *patr-e* = Skr. *pîtr-ê*. In the sixth century A. U. C. *ê* became *ei*, as in Oscan: thus find L. *patr-ei*, *Dior-ei*, &c., beside O. *pater-ei*, *Diuv-ei*, &c. Finally *ei* became *i*, as in *voc-i*, &c. The *u*-stems follow the

analogy of the cons. stems, as in *senatu-ei* (SC. de Tīburtibus) : here also final *ei* became *ī*, as in *ostentu-i*, and at last *-u-i* became *-ū*, a change which began early, as in *visū* (Lucr. 5, 101), &c. In the *a*-, *e*-, and *o*- stems the initial vowel of the termination *-ai* united itself to the stem vowel, and final *i* while it remained an independent syllable was long. Thus in the *a*-stems we have *terrā-ī* (Enn. Ann. 479) = *terra-ai*, later *terræ*, &c. ; final *ī* sometimes entirely disappeared in early times, as in the datives *Matuta*, *Tuscolana*, and similar forms dating from the sixth century, just as in Greek we have *θεᾷ* for *θεᾷι*, &c. ; *-āi* sometimes became *e*, as in the datives *Diane*, *Victorie*, &c., just as in Umbrian we have the datives O. U. *tute Ikuvine* = N. U. *tote Ijoveine*, O. U. *ase* = L. *aræ*. In Oscan we find the dative ending in *ai*, as in *aasai* = L. *aræ*. In the *e*-stems we have the dative ending in *-ēi* = *-e + ei*, as *fidē-i*, *spē-ī*, &c. ; and later in *-ē*, *i* being lost, as *fidē*. The dative of the *o*-stems ended originally in *-ōi*, as *populōi* = *populo-oi*, later *populō*, *i* being lost, as in Gr. *ἰππῳ* = *ἰππῳι*, &c. In Umbrian this dative ended in *e*, as *pople* = L. *populoi*, *Martie* = L. *Martioi* ; similarly in Volscian we have *deve* = L. *divoi*, *Declune* = L. *Declunoi*. In Oscan *o*-stems this case ends in *-iā*, as in O. O. *huria* = L. *horto*, &c. The Latin infinitive in *-re* is probably the dative of an abstract noun in *-as*, just as similar datives are used as infinitives in Sanskrit, as Skr. *kakshas-ē* (to see), &c. : *legere* would therefore be for *legese*—final *e*, though originally long, as representing *ai*, being shortened. This shortening of final *e* is not surprising, as the Romans forgot that the infinitive had been originally a dative ; and moreover, we have an analogous case in the loss of the final *ai* in Greek infinitives in *-μεναι*, as *ἔμεν* = *ἔμεναι*, &c.

### §. 138. THE DATIVE PLURAL.

We have already seen that in Sanskrit *bhyam* (= *bhi + am*), is used to form the dative singular of the pronouns, as in *tubhyam*, *mahyam*. This termination, with the addition of *s*, was

therefore most probably the original termination of the dative plural in Indo-European. The Old Prussian supplies us with a positive proof that this supposition is correct, as in it the dat. pl. ends in *-mans*, which represents an I. E. *-bhyams*. In Lithuanian this case ended in *-mus*, which also must have arisen from the same form, as the presence of the nasal is shown by *u*; for had the original form been *-bhyas*, we would have found *-mas*.

I. *Sanskrit Dat. Pl.* Here *-bhyams* becomes *-bhyas*, as in *marud-bhyas*, *nāubhyas*, &c. Final *ā* becomes *ē*, as in *śivēbhyas* from *śiva* (m. n.), &c.

II. *Greek Dat. Pl.* The locative plural is used as the dative in Greek.

III. *Latin Dat. Pl.* Here *-bhyams* became *-beis*, and later *-bis* in the pronouns, as in *vobeis*, later *vobis*, &c.; and *-bos* (?), and later *-bus* in the nouns, as in *navebos*, *oribus*, &c. The consonantal stems add *i* to the stem, as in *fratribus*, *hominibus*, from the stems *frater*, *homin*. It is possible that originally in Latin *-bus* was added immediately to the stem, and perhaps *bōbus* or *būbus* = *bov-bus*, is a relic of this stage. In the *i*-stems *i* in Old Latin became *e*, as in *tempestatebus*. In the *u*-stems, *u* sometimes became *i*, as in *fructibus*. In the *e*-stems *-bus* only occurs in Classical Latin in *diebus* and *rebus*; *speciebus* is censured by Cicero as not correct. In the *o*-stems *-bus* only occurs in *duobus* and *ambobus*. In feminine *ā*-stems *-bus* often occurs, as in *filiābus*, *deūbus*, &c. The dat. pl. of the *a*- and *o*-stems ends in *-is*. Two different explanations have been suggested to explain this termination. Schleicher supposes that *equis*, for example, arose from *equois*, and that *equois* again represents an older *equo-hios* = *equo-fios*, in which *-fios* = *-bhyas*. This explanation is most improbable, and it is much more likely that here,\* as in the Greek dat. pl., we have the old lo-

\* Consult Schleicher, "Compendium," &c., p. 587; and "Grundriss der lateinischen Declination von Franz Bücheler," p. 66.

cative: *silvais*, *agrois*, would then be for *silvaisi*, *agroisi*, just as Gr. ὕλαις, ἀγροῖς, are for ὕλαισι, ἀγροῖσι. The loss of final *i* is very common in Latin; thus we have *est* = Gr. ἐστὶ, *tremunt* = O. L. *tremonti*, &c. The oldest form of the Latin dative, without the addition of *i* to the stem-vowel, as in *mensa-i-s*, &c., is found on an inscription (C. I. L. 1, n. 814), where we read *devas Corniscas sacrum*, where *devas* and *Corniscas* correspond to the old Attic datives *ραμίαςι*, ὄπασι, &c. That the dative plural of the *a*- and *o*-stems originally ended in the diphthongs *-ais* and *-ois* is proved by the forms noticed by Festus, *oloes* (= *illis*), *privicloes* (= *priviculis*), and by the cognate Italic languages. On an old inscription, perhaps of Latin origin, we find *suois* and *cnatois* = L. *suis* and *gnatis*. In Oscan we find *Nuolaniūs* (m.) = L. *Nolanis*, *ūgatiūs* (m.) = L. *legatis*, *diumpais* (f.) = L. *lymphis*. In Umbrian the dat. pl. of the *a*- and *o*-stems ends in *-eis*, *-es*, *-is*, and in later Umbrian in *-eir*, *-er*, *-ir*; thus we have O. U. *termnes* (= L. *terminis*), O. U. *veskles* (= L. *vasculis*), O. U. *tekuries* = N. U. *dequrier* (= L. *decuriis*), O. U. *Treplanes* = N. U. *Treplaneir* or *Treblanir*, N. U. *toter* (= L. *tutis*), N. U. *alfir* (= L. *albis*), &c. In the *i*-stems this case ends in *-eis*, *-es*, following probably the analogy of the *a*- and *o*-stems; Schleicher, however, explains this form in the same way as Latin datives in *-is*, and deduces *aves*, *aveis*, from *ari-fos*, &c. The dative pl. of the consonantal stems ends in *-us*, as *fratrus* (*fratribus*), *dupursus* (*bipedibus*), &c. Schleicher considers that the oldest form of *fratrus* was *fratr-o-fos*, whence came *fratrus* through the stages *fratrufos*, *fratrufs*, *fratruss*.

#### §. 139. THE DATIVE DUAL.

This case in Indo-European perhaps ended in *-bhyâms*, a lengthened form of the pl. *-bhyams*.

I. *Sanskrit Dat. Dual*. The I. E. termination here became *-bhyâm*, as in *marud-bhyâm* from *marut* (m), *s'ivâ-bhyâm* from *s'iva* (m. n.) and *s'ivâ* (f.), &c. The *ā*-stems lengthen the stem-vowel before adding this suffix.

II. *Greek Dat. Dual.\** The dative and genitive dual have the same form in Greek : *-bhyāms* first, probably, became *-φιν*, and then *-ιν*, *φ* being lost. Stems ending in *-ι*, *-υ*, or a consonant, follow the analogy of the *a*-stems : thus we have *γενέοιν* and *γενοῖν* = *γενεσ-ο-φιν*, *ματέροιν* = *ματερ-ο-φιν*, *νεκύοιν* = *νεκυ-ο-φιν*, *γλυκέοιν* = *γλυκεF-ο-φιν* from St. *γλυκυ* with guna of the stem-vowel, Ion. *πολίοιν* = *πολι-ο-φιν*, *πολέοιν* = *πολεγ-ο-φιν* from St. *πολι* with guna of the stem-vowel, *ἵπποιν* = *ἵππο-φιν*, &c. In the Homeric forms *τοῖν*, *ῶμοιν*, *ἄλλήλοιν*, *βλεφάρουιν*, &c., from the stems *το*, *ῶμο*, *ἄλληλο*, *βλεφαρο*, &c., *ι* appears to have been added to the stem, and consequently *τοῖν* = *το-ι-φιν*, &c. This *ι*, perhaps, represents an older *a*, by which the *ā*-stems were lengthened as in Sanskrit ; *τοῖν* would then be identical with Skr. *tābhyām* (from St. *ta*) = *ta-a-bhyāms*. It has been suggested that the second *a* here is not a mere lengthening of the stem, but that it belongs to the termination : consequently the word should be thus divided, *ta-abhi-āms*, *abhi* being in this view the preposition. We find in some Greek consonantal stems datives similar to *τοῖν* ; thus we have *ποδοῖν* = *ποδ-ο-ι-φιν* from St. *ποδ*, *Σειρήνοιν* = *Σειρην-ο-ι-φιν* from St. *Σειρην*.

III. *Latin Dat. Dual.* There is no trace of the termination *-bhyāms* in any Italic language.

#### §. 140. THE ABLATIVE CASE.

In Indo-European this case was formed by adding *-t†* to the vocalic stems, with gunation of the stem vowel, or *-at*

\* Consult Schleicher, "Compendium," &c., p. 590; and Leo Meyer, "Gedrängte Vergleichung der griechischen und lateinischen Declination," p. 64.

† As the abl. sing. ends in Zend in *d* (written *t* by Schleicher), and in Latin in *d*, it is likely that *d* was the original form of the case-ending. This *d* may be connected with the pronouns *ad-as* (n. that) and *id-am* (n. that). Bopp considers that the *d* in these pronouns is derived from an older *t*, but it is quite possible that here we may have an independent pronominal stem.

with or without this gunation : in consonantal stems *-at* was simply added. This *-t* or *-at* is of pronominal origin, and was probably connected with the pronominal stem *ta*.\*

I. *Sanskrit Abl. Sing.* The original *t* only occurs in the *ā*-stems, as in *s'ivât* from *s'iva* (m. n.). Benfey† adduces one ablative of an *u*-stem ending in *-t*, *vidyôt* from *vidyu*. In all other stems *-t* has become *-s*, and the ablative agrees in form with the genitive. The change of final *t* into *s* is common in Greek, as in *τερυφός* = *τερυφορ*, &c., *ὁμῶς* for *ὁμωτ* = Skr. *samât* (abl. of St. *sama*, similar), &c. That final *-s* of the abl. has sprung from *-t* is proved by the Zend, where we still find the abl. termination *d* : thus we have Z. *patôid* (abl. of *pati*) = Skr. *patês* (abl. of *pati* = Gr. *ποτι*), which is found in compounds, beside Z. *patôis* (gen.) = Skr. *patês* (gen.).

II. *Greek Abl. Sing.* The I. E. *t* is found in Greek adverbs in *-ως*, where final *σ* = I. E. *t*, as no Greek word can end in *t* : moreover, *-at* has become *-ât* = *-ωτ* = *-ως*, just as in Zend.‡ Thus we have *πῶς*, Ion. *κῶς* = I. E. *kvât* from *kva*, *πάντ-ως* = *παντ-ωτ*, *ταχέ-ως* = *ταχέF-ωτ*, &c.

III. *Latin Abl. Sing.* In Old Latin and Oscan the abl. ends in *-d*, which is lost in Classical Latin and in Umbrian. Thus in Old Latin we find *dictator-ed*, *convention-id*, *senatu-d*, *navale-d*, *mari-d*, *alto-d*, *Gnaivo-d*, *praida-d*, *sententia-d*, &c. From *facilumed*, which is found in the S. C. de Bacc., we see that all adverbs in *-e* are of ablative origin, and spring from adjectives in *-us*, *-a*, *-um* ; the adverbial ablative ending in *-ed*, so as to be distinguished from the masc. and fem. ablatives of the adjective, which ended in *-od* and *-ad*. This *ē* was originally long, but gradually became short, as the adverbs were words in constant use. In Oscan *-d* is also found : thus we have

\* Consult Curtius "Zur Chronologie der Indogermanischen Sprachforschung," p. 255.

† Benfey's Practical Grammar of the Sanskrit Language for the use of early Students, §. 237, p. 197.

‡ Consult Bopp's "Comparative Grammar," vol. i., pp. 347, 348.

from *a*-stems, *sakaraklû-d* (sacello), *aragetu-d* = L. *argento*, *preivati-d* = O. L. *preivato-d*, *siuva-d* = O. L. *sova-d* (suâ), *ehtra-d* = O. L. *extra-d* (in S. C. de Bacc., *extrad urbem*), *Akudunnia-d* = L. *Aquiloniâ*, &c.; from an *i*-stem, *slaagi-d* (fine); the *u*-stems follow the analogy of those in *-i*, as *castri-d* from St. *castru*, which appears in Latin as an *a*-stem *castro*; the consonantal stems partly follow the *i*-stems, and partly end in *-ul*, as *præsent-id* = L. *præsentē*, *lig-ul* = L. *legē*. The Oscan also supplies us with additional proof that adverbs in *-e* were originally ablatives; for we find *amprufi-d* (= L. *improbe*), which is either from an *i*-stem or from an *a*-stem, as L. *improbe*. Perhaps the stem vowel was lengthened by *a*, as in the Latin adverbs; in the latter case O. *-id* and L. *-ed* would both point back to an older *-eid* = *-oid* = *-a-i-d* = *-a-a-d* or *-a-a-t*. This lengthening of *ā*-stems by adding *ā* is, as we have already seen, of frequent occurrence in Sanskrit. In Umbrian *-d* has been lost, as in the *a*-stems, *puplu* = O. L. *poplod* (populo), *vinu* = O. L. *veinod* (vino), *terminu* = L. *termino*, *mefa* = L. *mediâ*, *tuta* = O. *touta-d*, *mestru* = L. *magistrō*, &c.; in the *i*-stems, *ukri*, &c.; in the *u*-stems, which, however, as in Oscan, follow the analogy of the *i*-stems, as *mani* = L. *manu*, &c.; in the consonantal stems, as *kvestur-e* = L. *quaestore*, &c.\*

\* In Sanskrit, Greek, and Latin, we find the suffixes, Skr. *-tas*, Gr. *-θεν*, L. *-tus*, employed to form adverbs with an ablative meaning, and which in some cases actually take the place of the ablative, especially in the pronominal declension. Thus in Sanskrit we have *svarga-tas* (from heaven) from *svarga*, *ku-tas* (whence) from *ku* = *kva* (who), *itas* (from here), also used as abl. of *id-am* (n. this), &c. The Skr. pronouns of the 1st and 2nd pers. attach *-tas*, not to the true stem, but to the abl., as *mat-tas*, *tvat-tas*. In Latin *-tus* corresponds to Skr. *-tas*, as in *cæli-tus*, &c. This termination has also a locative meaning in Latin, as in *in-tus*, *sub-tus*. The Greek *θεν* is from a different root; for Gr. *θ* = Skr. *dh*, and not *t*; *πό-θεν*, *τό-θεν*, *ἐ-θεν*, do not therefore correspond exactly to Skr. *ku-tas*, *ta-tas*, *ya-tas*, but would require such forms as *ku-dhas*, &c. We find *-dhas*, however, in Skr., *adhas* (down), with which Benfey connects Gr. *ἐν-θεν*. We also find the exact representative of Skr. *-tas* in Gr. *ἐν-τός*, *ἐκ-τός*, which have a locative meaning. It is possible that in

## §. 141. THE ABLATIVE PLURAL.

This case agrees in form with the dat. pl.

## §. 142. THE ABLATIVE DUAL.

This case agrees in form with the dat. dual.

## §. 143. THE GENITIVE SINGULAR.

In Indo-European the gen. sing. of the *ā*-stems ended in *-sya*, and that of all other stems in *-s* or *-as*. The origin of these suffixes has been already discussed in §. 105.

I. *Sanskrit Gen. Sing.* In consonantal stems and monosyllabic ones ending in any vowel except *ô*, this case ends in *-as*, as *marut-as* from *marut* (m.), *nāv-as* from *nāu* (f.), *bhīy-as* from *bhī* (f. fear), &c. The gen. sing. of monosyllabic stems in *-i* and *-û* may also end in *-âs*, as *bhīy-âs*, &c. ; stems in *-ar* originally formed their gen. in *-as*, as we see from the Vedic genitives *pitr-as*, *nar-as*, from the stems *pitar*, *nar* (m. a man); but in later Sanskrit we find the remarkable forms, *pitur*, *mâtur*, *dâtur*, &c., as gen.s of the stems *pitar*, *mâtâr*, *dâtâr*, &c. Bopp considers that *-ur* here arose from *-urs* = *-rus* = *-ras*, and consequently that the old form *pitras* passed through the stages *pitrus* (= Gr. *παρρός*) and *piturs* in becoming *pitur*. According to this view the final *r* is the stem *-r* transposed; but it is more natural to suppose that the old form *pitras* became *pitrs* (*a* being lost, and *r* treated as a vowel), and that from *pitrs* arose *pitus* (as this gen. ought properly to be written), *r* becoming *u*, as is very common in Prâkrit.\* The Zend supports the view that these gen.s originally ended in *-as*: thus we have Z. *dathrô* (for *dathr-as*) = Skr. *dâtus*, Z. *nařs-*

In Indo-European these suffixes had at first a merely locative signification, and that *-ta-s* marked the direction *whither*, and *-dha-s* the place *where*, the former being from the verbal root *ta* (to stretch), and the latter from *dha* (to place), and the final *s* coming from the pronominal stem *sa*.

\* The form *pitus* may also be accounted for by supposing that the gen. sing. was originally *pitâras* (= Gr. *παρίπος*), and that this, through the influence of the accent, became, firstly, *pitârs*. and then *pitâs*.

*dhro*<sup>\*</sup> (euphonically for *naptró*) = Skr. *naptus*, final *-as* becoming *ó*, as usual. In Z. *áthras'-k'a* (ignisque) we find the gen. still ending in *-as*, from St. *átar*. In Vedic the gen. of the *i*- and *u*-stems was formed by adding *-as* directly to the stem-vowel, as in *pas'v-as* from *pas'u* (m. cattle), *madhv-as* = Gr. *μέθv-ος* from *madhu* (n. honey), *ary-as* from *ari* (m. an enemy), as Gr. *ἰδρι-ος* from *ιδρι*. We find traces of this formation in later Sanskrit, as in *paty-us* for *paty-as* from *pati* (m. a master), *sakhy-us* for *sakhy-as* (m. a friend). The original genitive in *-as* was supplanted by other forms; and with the exception of Skr. *paty-us*, and *sakhy-us* no traces of it are found except in Vedic. Masculine stems in *-i* and *-u* gunate the stem-vowel, and add *s*, as *kavê-s* from *kavi* (m. a poet), *bhânô-s* from *bhānu* (m. the sun), &c. Neuter stems are lengthened by *u*, as *vâri-n-as* from *vâri* (n. water), &c. Feminine stems in *-i* and *-u* either follow the analogy of the masc. stems in *-i* and *-u*, or attach *-âs* directly to stem, while feminine stems in *-î* and *-û* can form their genitive only in the latter way: thus we have *gatê-s* or *gaty-âs* from *gati* (f.), but only *nady-âs* from *nadî* (f.), &c. Feminines in *-âi* change the stem-vowel into *-âi* before *-âs*, as *s'ivây-âs* from *s'ivâ*, &c. Masculines and neuters in *-â* form the gen. by adding *-sya*, as *s'iva-sya* from *s'iva* (m. n.), &c.; *-sya* occurs in no other stems except in the pronominal stem *amu*, the gen. of which is *amushya*.

II. *Greek Gen. Sing.* In consonantal stems this case is formed by adding *-ος* to the stem, as in *ποδ-ός*, *μένους* = *μενεσ-ος*, *αἰδόος* and *αἰδοῦς* (Æol. *αἰδωος*) = *αἰδοσ-ος*, *ἐρέβους* (Hom. *ἐρέβευς*) = *ἐρεβεισ-ος*, *Γοργύος* (Dor. *Γοργῶς*, Æol. *Γόργωος*) = *Γοργον-ος*, *πατρ-ός* and *πατέρ-ος*, &c. The gen. of stems ending in a diphthong, or *ι* or *υ*, is formed in a similar way, as *ναF-ός*, *βοF-ός*, *ῥβρι-ος*, *ἀχλύ-ος*, *γουνός* = *γουνυ-ος*, *δουρός* = *δορυ-ος*, &c.: the stem-vowels *ι* and *υ* can also be gunated before *-ος*, as *πόλε-ως*,\* *πόλε-ος*, and Hom. *πόλη-ος*

\* The lengthening of *-ος* here is analogous to the lengthening of *-as* in the gen. sing. of Skr. feminine stems in *-â*, *-î*, and *-û*.

= πολεγ-ος, beside Ion. πόλι-ος\*, Hom. μάντη-ος = μαντή-ος, beside μάντι-ος, γλυκέF-ος, ἄστεF-ος and ἄστε-ως; πολέF-ος from πολυ. In feminine *a*-stems the gen. sign -as was immediately added to the stem-vowel, as in σοφίᾱς, φυγῆς. The gen. of the masculine and neuter *a*-stems ended originally in -σγο; the Hom. gen. *s* in -οιο and -οο are derived at once from -ο-σγο; \* thus κταμένοιο = κταμενο-σγο, ἀγρόο = ἀγροῖο = αγρο-σγο. The ordinary gen. in -ου, Æol. -ω, arises from -οο simply by contraction. The Hom. gen. in -ao is probably derived from an older form in -α-σγο, as in Ἀτρεΐδᾱο, &c.; -ᾱο sometimes become -ω, as in Αἰνείω, &c.; and final -ο is sometimes lost, as in the Æol. Ἀΐδα, Κρονίδα, &c. \* In the Arcadian dialect -ao becomes -αυ, as in Ἀπολλωνίδαυ, Ἐαυ, &c. Curtius\* deduces the gen. ending -ao from -αος = Skr. -āyās, but the former explanation is much more probable. Such genitives as ποιήτου, πολίτου, &c., are derived from older forms in -ᾱο: thus πολίτου = πολιταο, &c. In the Thessalian dialect † the gen. sing. of the *o*-stems frequently ended in -οι. Ahrens considers, and rightly I believe, that this -οι represents the older -οιο, final *o* being merely lost, as in gens. in *ā*. In opposition to this view it has been suggested that this gen. in -οι is properly an old locative, which is here used in the genitive signification, just as in Latin the gen. in -i is supposed to have been also originally a locative.

III. *Latin Gen. Sing.*—The I. E. gen. suffix -as appears in Latin in the forms -os, -us, -is, -es. The gen. of consonantal stems is formed by adding the suffix immediately to the stem: thus we have *ped-is*, *gener-is* for *genes-is*, *nomin-is*, *patr-is*, &c. The I. E. -as in becoming -is first became -os (which is found in the *u*-stems), and then -us (which is found on inscriptions up to the middle of the seventh century A. U. C.

\* Curtius, "Grundzüge der griechischen Etymologie," p. 646.

† Ahrens, "De Dialectis Æolicis," &c., p. 221; and "De Dialecto Dorica," p. 528, *seq.*

in *Min-us*, *Vener-us*, *Cerer-us*, *patr-us*, &c.). In Old Latin we also find the gen. of consonantal stems ending in *-es*, as in *Salut-es*, *Apolon-es*, *Cerer-es*. In late Latin this gen. in *-es* again appears as in the gens. *Cæsar-es*, *campestr-es*. This *-es* either arose from *-is*, or else preceded it, the I. E. *-as* becoming first *-es*, and then *-is*; or perhaps we can detect here the influence of the *i*-stems, and *-ēs* may be equal to *-eis* or *-īs*. Final *s* was often lost in old and vulgar Latin, as in *Cæsar-u* (C. I. L. 1, n. 696), *Palestrion-i* (Pl. Mil. Glor. 387), &c.; and in many cases, where it was written, it was not pronounced, as in *militis qui amicam* (Pl. Bacch. 574), &c.\* As the gen. of the *i*-stems ends in classical Latin in *-is*, it agrees in form with that of the cons. stems; thus *ovis*, *piscis*, &c., would have had the same form, if they had been derived from the stems *ov*, *pisc*, &c. But this gen. ending *-is* was perhaps originally long (*-īs*), and arose from *-i-os*, just as *alis* = *alios*. The close connexion of the consonantal stems with those in *-i* is shown by the gen. form *part-us* (Tab. Bant.), from St. *part* beside *parti-s* from St. *parti*. The gen. of the *u*-stems was formed by adding *-os* to the gunated stem; thus, *senatu-os* (S. C. de Bacc.) = *senatov-os*, *magistratu-os*, &c.; *-os* afterwards became *-us*, as in *domu-us*, *exercitu-us*, *conventu-us* (all on inscriptions); and from *-u-us*, by contraction, arose the usual gen. in *-ūs*, and in Old Latin *-ū*, final *s* being lost. Beside these gens. in *-u-os*, *-u-us*, *-ūs*, we also find another form in *-u-is* in use up to Cicero's time, as in *senatu-is*, *domu-is*, &c., cited by Gellius, *anu-is* (Ennius), *metu-is* (Cicero), &c.: *su-is* and *gru-is* always kept this form. The *u*-stems are also declined like those in *-o*, as gen. *sumpti* beside *sumptus*, *questi* beside *questu-is* (Ter. Hec. 735), and *questus*, *senati*, *gemitu*, *geli*, &c. The gen. of neuter *u*-stems followed the analogy of the masculine, as *cornu-is*, *cornūs*, and *cornū* (final *s* being lost, as in gen. *senatu*, C. I. L. 1, n. 1166),

\* Bücheler, "Grundriss der lateinischen Declination." p. 30. *see*.

from *St. cornu*. The gen. of the *o*-stems, masc. and neut., ends in *i*, in late Latin *-ei*. Three different ways of explaining this form have been suggested: one is, that this case is really the locative, which has here supplanted the old genitive; another is, that we find here a trace of the termination *-āsyā*, e. g. *agri* = *agroī* = *agro-syā*; the last is, that the gen. originally ended in *-o-is*, e. g. *agri* = *agro-is*. This last explanation is much the most likely, for in Umbrian and Oscan the final *s* is still retained; thus we have O. O. *siveis* = L. *sui*, O. O. *Pūmpaiia-neis* = L. *Pompeiani*; O. U. *puples*, *puple*, and N. U. *popler* = L. *populi*; O. U. *katles* and *katle* = L. *catuli*, &c. These forms point back to an Italic gen. in *-ois*, whence came O. O. *-eis*, O. U. *-ēs*, *-ē*, and L. *-i*, final *s* being lost. This *-ois* may be explained in three different ways: either the stem was lengthened by *y* (= *i*), and *-as* added, as to the consonantal stems, *agrois* representing therefore an older *agra-y-as*; or the analogy of the *i*-stems was followed here, and *-is* added directly to the stem; or, more simply, *-as* was added to the stem without the intervention of *y*, and, consequently, *-o-is* = *-a-is* = *-a-as*. Final *i*, though essentially long, was sometimes shortened by Plautus; and disappeared in *Næpor* for *Næi* (= *Grævi*), *por* and *Marpor* = *Marcipor*. The gen. sing. of the fem. *ā*-stems ended originally in *-ās*, as *terras* (Næv.), *vias* (Enn.), *fortunas* (Næv.), &c.; the same ending is found in O. *eituas* (pecuniæ), O. *miiltas* (= L. *multæ*), U. *tutas*, &c.; in classical Latin it is still found in (*pater*-, *mater*-) *familias*. The gen. sing. of these stems also ends in *-āi* (in Ennius, Plautus, Lucretius, &c.), later *-æ*. This *-āi* arose perhaps from *-ais* = *-ay-as*, the stem being lengthened by *y* (= *i*); *-ais* is found in the gen. *Prosepnais* (C. I. L. 1, p. 554) = *Proserpinæ*, and it appears as *-æs* in *Faustæs*, *Dianæs*, *Lepidæs*, &c. This form in *æs* belonged entirely to vulgar Latin, and is not found before the seventh century A. U. C. It penetrated even into the masc. *a*-stems, as in *Messalæs*, *Midæs*. We may also explain the form *-ais* in the same way as we ex-

plained the masc. *-ois*, without supposing the stem to be lengthened by *y*: thus, by adding *-as* directly to the stem we get, on the one hand, *-ā-is* = *-ā-as*, the second *a* being weakened to *i* to diminish the weight of the termination, as in *-o-is* = *-ā-as*, while on the other hand we obtain by simple contraction the other form of the gen. *-ās* = *-ā-as*. A third explanation has been suggested: it is supposed that the *ā*-stems formed their gen. by adding *-sya*, following the analogy of those in *-ā*, and that consequently *-āi* = *ā-sya*; but this theory is extremely improbable, for no trace of the I. E. *-sya* is found in the corresponding Oscan and Umbrian stems. The gen. of the *e*-stems is formed similarly to that of those in *-ā*: thus corresponding to the gen. in *-ās*, we find the gen. in *-ēs*, as *rabies* (Lucrct.), *fides* (Plaut.), *dies* (Enn.), &c.; this gen. perhaps appears in *Diespiter* (the father of day). Corresponding also to the gen. in *-āi*, we find the gen. in *-ēi*, later *-ēī*, except when immediately preceded by a vowel; and then still later corresponding to *-ae*, we find *-ei* contracted into a diphthong: thus we have *fidēi* (Enn.), *rēi* (Plaut.), &c.; then *rēī* (Pl.), *fidēī*, &c.; but always *aciēi*; then in the Comedians, *rei*, *spei*, are frequently monosyllables. The gen. of the *e*-stems also ends in *ē*, which may be derived either from *-ēs*, *s* being lost; or from *-ei*, *i* being lost; as *perniciē*, *fidē*, *aciē*, *diē*. Finally, we find a gen. in *-i* after the analogy of the *o*- and *u*-stems, as *fami* (Cato), *plebi* (Tab. Bant.); and even when *i* immediately precedes, as in *pernicii* (Cic. according to Gellius), *progenii* (Pacuv.), &c., where we might have expected final *e* to be retained to avoid the conjunction of two *i*'s: this *i* evidently arose from the diphthongisation of the original *-ēi*, as in the monosyllabic *rei*. In Oscan the gen. of the consonantal stems is formed by adding *-eis*, as *Juv-eis* = L. *Jovis*, *maatr-eis* = L. *matris*. The gen. of the *i*-stems also ends in *-eis*, as *Herentateis*, from St. *Herentati*, *Livkanateis* from St. *Livkanati*. We find only one example of an *u*-stem, viz., *castrous* from St. *castru*; here *-s* appears to have been simply added to the gunated stem, as in Sanskrit. We have already noticed

the Oscan and Umbrian *a*-stems. In Umbrian the consonantal stems form their gen. in *-es*, N. U. *-er*, following the analogy of the *i*-stems, as N. U. *nomn-er* from St. *nomn* beside N. U. *ocrer* from St. *ocri*. In the *u*-stems we find *o* instead of the old *u*, as in N. U. *trifo-r* (from St. *trifu*) = L. *tribu-s*.

#### §. 144. THE GENITIVE PLURAL.

The oldest form of the termination of the gen. pl. in Indo-European was probably *-as-am-s*, *-as* being the sign of the gen. sing., *-am* the pronominal element which is found in *-bhi-am*, &c., and *-s* the sign of the plural. From *-asams* came first *-asām*, then *-sām*, and finally *-ām*. We find traces of the first of these forms in the Sanskrit pronominal declension, as *téshām* (horum) = *ta-āsam* from St. *ta* (hic), *yéshām* (quorum) = *ya-āsam* from St. *ya* (qui), &c.; and in the Latin *o*-stems, as *equōrum* (from St. *equō*) = I. E. *akva-asām* (from St. *akva*), &c.

I. *Sanskrit Gen. Pl.* The gen. ending *-sām* is only found in the pronominal declension: in the nominal declension this case was formed by attaching *-ām* immediately to stems ending in a consonant or diphthong, as *marut-ām*, *manas-ām*, *bharat-ām*, *nāṁ-ām*, &c., from the stems *marut* (m.), *manas* (n.), *bharat* (m.), *nāṁ* (f.), &c. Polysyllabic vocalic stems lengthen the stem by *n*, as in *gatī-nām*, *rātri-nām*, *śivā-nām*, *nadī-nām*, &c., from the stems *gati* (f.), *vātri* (n.), *śiva* (m. n.), *nadī* (f.), &c.: short stem-vowels are always lengthened before this *n*. Monosyllabic feminine stems in *i* and *u* may either add *n* or not; thus from *bhī* (f.) we have *bhiy-ām*, or *bhī-nām*, &c. Stems in *-ar* form their gen. pl. from the weak stem in *-r*, and add *n*, as *pitṛ-nām*, *mātṛ-nām*, *dātṛ-nām*, &c., from the stems *pitar*, *mātar*, *dātār*, &c. In Vedic we find older forms of these genitives without *n*, as *dēvām* from St. *dēva* (m. a god), *nar-ām*, *svasr-ām* from stems *nar* (m. a man), *svasr* (f. a sister).

II. *Greek Gen. Pl.* This case is formed by adding *-ων* to all stems, except those ending in *-ā*; *i*- and *u*-stems are

sometimes gunated. Thus we have ποδ-ῶν, δεπά-ων = δεπασ-ων, στηθῶν and στηθέων = στηθεσ-ων, μακάρ-ων, ναF-ῶν, βασιλή-ων = βασιλεF-ων, συ-ῶν, γενύ-ων, γούν-ων = γονυ-ων, πολῶν and πολέ-ων = πολεF-ων from St. πολυ gunated, πολί-ων beside πόλε-ων = πολεγ-ων from St. πολι gunated, ἀγρῶν = ἀγρο-ων, χωρῶν = χωρᾱ-σων. The gen. pl. of the *ā*-stems generally ends in Homer in -*ā*-ων = -*ā-sām*; thus we find θεᾶ-ων = θεᾶ-σων from St. θεᾶ, τᾶ-ων = τᾶ-σων = Skr. *tā-sām* from St. *ta*, &c. This -*ā*-ων became -ε-ων in Ionic.

III. *Latin Gen. Pl.* This case is formed by adding -um, O. L. -om (found in the *u*-stems and in the *o*-stems after *v* or *u*), to stems ending in a consonant or -*i* or -*u*. Thus we have *princip-um*, *fulmin-um*, *can-um*, *matr-um*, &c.; *avi-um*, *ovi-um*, &c.; *magistratu-om* perhaps for *magistratov-om*, *fructu-um*, &c.; and with -*u-um* contracted, as in *passum* (Pl.), *currum* (Virg.), but in vulgar Latin also after the analogy of the *o*-declension, *verso-rum*, *spirito-rum*, &c. Many consonantal stems are lengthened by *i*, and so their gen. pl. termination agrees in form with that of the *i*-stems: thus we have *merc-i-um*, *radic-i-um*, *forcip-i-um*, *penat-i-um*, *amant-i-um* beside *amant-um*, *ferent-i-um* beside *ferent-um*, &c. Stems ending in -*n*, -*r*, or -*s*, seldom permit this addition of *i*; we find, however, *vir-i-um* and *complur-i-um*. We find some examples of consonantal stems following the analogy of those in -*u*: thus we have *alit-u-um* (Lucr. and Virg.) beside *alit-um*, and on inscriptions *virtut-u-um*, *fratr-u-um*, &c.

The masc. and neut. *o*-stems form their gen. pl. in two ways: by adding either -om (or -um) = I. E. -*ām* or -*ōrum* = I. E. -*asām*. Thus we find in Old Latin the forms in -om, *Romanom* (C. I. L. 1, n. 1), *sovom* (C. I. L. 1, n. 588) = *suo-rum*, *divom* (Lucr.) &c.; later in -um, as in *virum*, *deum*, *meum*, *nummum*, *modium*, *talentum*, *fabrum*, &c. Similarly in Oscan we find *Abellanum*, *Tiatium*, *Nivlanum*, and in Umbrian *puplum*, later *poplom* (populorum), &c. The other gen. pl. ending in -*ōrum*, (m. n.) and -*ārum* (f.) is the usual

form, as in *bonōrum* = *bonō* + *ōrum*, *bonārum* = *bonā* + *ārum*, &c. In Oscan the gen. pl. of the *ā*-stems ends in *-azum*, and in Umbrian in *-arum*, *-arū*, as in O. *eisa-zun-c egma-zum* (illarum rerum), U. *menzaru* = L. *mensarum*, &c. The *ē*-stems follow the analogy of the *ā*-stems, as *dierum*, *rerum*, &c. Masc. stems in *-a* form their gen. pl. in *-rum*, but in the poets we find the form in *-um* in compounds of *-gena* and *-cola*, and in the patronymics in *-des*, as *agricolum*, *terrigenum*, *Æneadum*, &c. Two feminine stems in *-ā* form their gen. pl. also in *-um*—namely, *amphorum* and *drachmum*, but these forms were probably borrowed from the Greek. We find other traces of the gen. pl. ending *-sum* in the forms (noticed by Varro and Charisius) *boverum*, *nucerum*, *regerum*, *lapiderum*, which are supposed by Bopp to have been formed from the *i*-stems *bovi*, *nuci*, *regi*, *lapidi*, and consequently to be for *bovirum*, &c., thus proving that *-rum* was also originally attached to the *i*-stems. These forms have been also explained by supposing them to have been formed from the stems *bover*, *nucer*, &c., the original stems *bov*, *nuc*, &c., being lengthened by the addition of *-er*, because this *r* appears also in some stems in the gen. sing., and consequently is not peculiar to the plural: thus we find *sueris*, *puberis*, *acipenseris*, *cucumeris*, beside *suis*, *pubis*, *acipēnsis*, *cucumis*.\*

The Oscan and Umbrian form the gen. pl. of stems ending in *-i* or a consonant in the same way as the Latin.

#### §. 145. THE GENITIVE DUAL.

This case agrees in form with the locative dual.

#### §. 146. THE LOCATIVE SINGULAR.

In Indo-European the sign of this case was probably *-in*, which was added directly to the stem. This *-in* was connected

\* Consult Bopp's "Comparative Grammar," I., p. 490; and Bücheler "Grundriss der lateinischen Declination," p. 40.

with the pronominal root *-am*, which was reduced firstly to *-an* (*n* being weaker than *m*), and then to *-in* (*i* being weaker than *a*). From *-an* are derived the prepositions, Gr. ἐν, L. *in*. The oldest form (*-am*) of this suffix is still perhaps found in *-ām*, the locative ending of Skr. fem. stems.

I. *Sanskrit Loc. Sing.* Stems ending in a consonant or diphthong form this case by adding *-i* to stem, as *marut-i*, *bharat-i*, *pitar-i*, *nāv-i*, *gav-i*, from the stems *marut*, *bharat*, *pitar*, *nāu*, *gō*. Masc. stems in *-i* and *-u* add *-āu*, before which the stem-vowel disappears, as in *kavāu*, *bhānāu*, from *kavi*, *bhānu*: the stem-vowel is still kept in *paty-āu* and *sakhy-āu* from *pati* and *sakhi*. This *-āu* perhaps represents *-ām*, the gunated form of *-am*. Fem. stems in *-i* and *-u* either follow the analogy of the masc. in *-i* and *-u*, or else add *-ām*, as *gat-āu* or *gaty-ām* from *gati*. Polysyllabic fem. stems in *-ā*, *-ī*, or *ū*, always add *-ām*, as *s'ivā-y-ām*, *nūdy-ām*, *radhv-ām*, from *s'ivā*, *nadī*, *vadhū*. Monosyllabic fem. stems in *-ī* and *-ū* add either *-i* or *-ām*, as *bhuv-i* or *bhuv-ām* from *bhū*. Neuter stems in *-i* and *-u* lengthen the stem by *n*, as *vāri-n-i* from *vāri*. Masc. and neut. stems in *-a* add *-i*, as *s'ivē* from *s'iva* (m., n.).

In Vedic we find the loc. of the *u*-stems formed by simply adding *-i*, as *tanv-i* (from *tanu*, f. the body) = Z. *tanv-i* (loc. of *tanu*, f. id.); this form corresponds to Gr. dat., as *νέκυ-ι*, &c. We also find in Vedic *-i* added to the gunated *u*-stem, as *sūnav-i* (from *sūnu*, m. a son) = Ch. Sl. *sūnov-i*. The loc. of the fem. *ā*-stems also ends sometimes in *-ē* in Vedic. The loc. ending *-in* is only found in Sanskrit in the pronominal declension, as in *ya-sm-in* from *ya* (who), *ta-sm-in* from *ta* (that), &c.

II. *Greek Loc. Sing.* The Gr. dat. sing., except in the case of the *ā*-stems, is properly a loc., being formed simply by the addition of *ι*: thus we have *ποδ-ι*, *γέροντ-ι*, *μητέρ-ι*, *χρo-ι* for *χρoσ-ι*, *βέλε-ι* for *βελεσ-ι*, *λᾶF-ι*, *νηF-ι*, *συ-ι*; *νέκυ-ι*, *δουρ-ι* for *δορυ-ι*, *γλυκε-ι* for *γλυκεF-ι*, *πόλε-ι* for *πολέγ-ι*, &c.

The loc. meaning is still frequently found, as in *Δωδῶν-ι*, *Μαραθῶν-ι*, \**Σαλαμῖν-ι*, *νυκτ-ί*, &c.

In the *a*-stems we find the loc. and dat. both in existence beside each other, as dat. *ἀγρῶ* = *ἀγρο* + *οι* beside loc. *οἴκοι* = *οἴκο* + *ι*, dat. *τιμῇ* = *τιμᾶ* + *ᾱι* beside loc. *χαμαί* = *χαμα* + *ι*. *Χαμαί* is the only example of the loc. of an *ā*-stem, unless the preposition *ὑπαί* (*ὑπό*) be the loc. of a stem *ὑπᾶ*, just as *ὑπείρ* (*ὑπερ*) appears to be the loc. of a stem *ὑπερ*, and to be for *ὑπερι* = Skr. *upari* and Z. *upairi*. Besides *οἴκοι* we find many other examples of locs. of *o*-stems, as *Πυλο-ι* (found in *Πυλοιογενής*—compare *χαμαι-εύνης*), *πέδο-ι* (*Æsch. Prom.*), *Æol. μέσσο-ι* or *μέσο-ι* (*Alc.*), *Æol. ἔνδο-ι* (*ἔνδον*), *Æol. ὕψο-ι* (beside *ὕψου*), *ποῖ* = *πο* + *ι*, &c. In *Æolic* we frequently find this loc. termination *-ο-ι* becoming *-υ-ι*: thus we find *μέσυ-ι* = *μέσο-ι*, *τυῖδε* (here) for *το-ι-δε*, *πήλυ-ι* (*τῆλοσε*), *ἄλλυ-ι*, *ἀτέρυ-ι* (*ἐτέροσε*) = *έτερο-ι*. In *Doric* we find *-οι* represented by *-ει*, as in *εἰ* (*οἰ*), *πεῖ* (*ποῖ*), *τηνεῖ*, *τουτεῖ*, *τεῖδε*, *Lac. ἔξει* (*ἔξω*, *Syrac. ἔξοι*). We also find in common Greek this same loc. in *-ει*, as in *ἐκεῖ* = *ἐκο-ι* from *St. κο* = *I. E. kva*, *ἀμαχεί*, *πανοικεῖ*, *ἀμισθεῖ*, *πανστρατεῖ*: *-ει* sometimes became *-ι*, as in *ἀμαχί*. \**Αγχ-ι* is perhaps for *ἄγχε-ι* from an *o*-stem *ἄγχο*, whence *ἄγχοῦ*: comp. *Hom. ἀγχε-μαχος*, where *ἄγχε* = *ἄγχε-ι*, *ι* being lost. \**Ατεῖ* may also be the loc. of a stem, *αιFo* = Skr. *éva* = *L. ævo*: in *Lesbian Æolic* this particle appears also in the forms *αῖν*, *ᾷν*, where final *ν* is perhaps the original loc. *η*. The datives *μοί*, *σοί* = *Dor. τοί*, are probably locatives, and correspond to the Skr. loc.s *may-i*, *tva-y-i*, from the stems *ma*, *tva*; *may-i* being = *ma-i-i* = *ma-a-i*, the stem being lengthened by *a*, and then this *a* being weakened to *i*, and similarly *tva-yi* = *tva-a-i*.

III. *Latin Loc. Sing.* The locative of the consonantal stems ended in *-i*, later *-e*: the loc. ending was properly *i*; but the consonantal stems were lengthened by *i*, and so followed the analogy of the *i*-stems, and thus *i* = *-i* + *i* arose; thus we find *loc-i* (*Pl. Amph. 165*), *rur-i* (*Pl. Most. 799*), and

*rur-ē*, *vesper-i* and *vesper-e*, *infelic-i*, *arbor-i* (Liv. 1, 26, *infelici arbori recte suspendito*), *her-i* for *hes-i* from\* *hes* (= Gr. *χθής*) which appears in *hes-ternus*, *Anxur-i*, *Acherunt-i*, *Sicyon-i*, &c. *Mane* is the loc. of an *i*-stem, and *domu-i* of an *u*-stem; for *domu-i* we generally find *domī* and *domī* after the analogy of the *o*-stems.\* The loc. of the *o*-stems ends in *-i* (Old Latin also *-ei* and *-e*) = *-o-i*, as *humi* (from St. *humō*) = *humō-i*, *belli*, *foci*, *Ephesi*, *Corinθi*, &c. This case is also found in *postri-die*, *quoti-die*, *pri-die*; and in Old Latin we find *die quinte* and *die quinti*, *die septimeī*, *die crastini*, &c. Similarly the loc. of the *a*-stems is formed by adding *-i*, as *Roma-i*, later *Romæ*, *militiæ*, &c. In Oscan the loc. of the *o*- and *a*-stems is formed in the same way as in Latin: thus we have *niinikei terei* (in *communi agro*), *tero-* being a neuter stem, and *esai viai mejiā* (in *ea via media*). The loc. *-n* has nearly disappeared, but it probably still exists in *-en* (lo!) loc. of St. *i*, and in *peren-die*, *peren* being loc. of St. *pero* = Skr. *para* (another), which is also found in *per-egre*, from *pero* and *agro*. In Oscan we find this *n* in *hortin Kerriūn* (in *horto Cereali*), *hortin* being probably for *hortein* from St. *horto*. In Sabellian we also find it in *esmen-ek asin* (on this altar), from stems *esmo* and *asa*: *esmen* is identical with Skr. *asmin*, except that it still retains the stem-vowel, which is lost in Sanskrit. *Jam* is also supposed to be a loc. from a stem *ja*, and is identified with Skr. *yasmin*, loc. of *ya*. In Umbrian we find two peculiar locative suffixes, *-mem* or *-me* in sing., and *-fem* or *fe* in pl. No satisfactory explanation of these forms has as yet been suggested: Aufrecht and Kirchhoff consider that *mem* and *fem* were originally identical,† and connected with Skr.

\* *Domus* was originally an *o*-stem = Gr. *δῶμος*.

† Lottner agrees with Siegfried's view that the suffixes *-mem*, *-fem* originally began with *m̥bh*; see Siegfried's remarks on the Gaulish inscription of Poitiers, arranged and edited by C. F. Lottner.

*bhyām*, while Bopp\* considers that they arise from a postposition added to the acc.s sing. and pl. In Umbrian we also find traces of a loc. in *-i*, as in O. U. *sve* (if) = O. O. *svai* = L. *si*, O. U. *pre* = L. *præ* for *pra-i*, from a St. *pra*; N. U. *perne* (from the front), N. U. *postne* (from the rear).

### §. 147. THE LOCATIVE PLURAL.†

Schleicher considers that the original termination of this case in Indo-European was *-sua-sa*, *-sua* being of pronominal origin, and *sa* the mark of the plural. From *-svgsa* are derived the Vedic loc. ending *-susu*, the Zend *-shva*, *-shû*, *-shu*, *-hva*, *-hû*, *-hu*, the old Persian *-suvâ*, the Skr. *-su*, *-shu*, and the Gr. *-σσι*, *-σι*.

I. *Sanskrit Loc. Pl.*—This case is formed by adding *-su* (or *-shu*) to the stem, final *ā* becoming *ê*; thus we have *s'ivê-shu*, *s'ivâ-su*, *kavi-shu*, *marut-su*, &c., from *s'iva* (m., n.), *sivâ* (f.), *kavi* (m.), *marut* (m.), &c.

II. *Greek Loc. Pl.*—This case ends in *-σσι* or *-σι*, from *-σφι*, before which stems in *-ā* are lengthened by the addition of *i*, as is the case with *ā*-stems in Sanskrit. This *-σσι* or *-σι* is added to some consonantal stems and some ending in *-i* and *-u*, by means of the helping vowel *ε*: thus we have *ποσ-σί* for *ποδ-σι*, *κτήμα-σι* for *κτηματ-σι*, *δεπά-εσσι* for *δεπασ-εσσι*, *βελé-εσσι* for *βελεσ-εσσι*, *βόF-εσσι*, and *βου-σί*, *κύν-εσσι* and *κυ-σί*, *φέρου-σι* for *φεροντ-σι*, *νεκύ-εσσι* and *νέκυ-σσι*, *πολί-εσσι*, *πόλι-σι* and *πόλε-σι* = *πολεγ-εσσι* from *πολι*, *πόλε-σσι* for *πολεF-εσσι* from *πολυ-*, *ἵππο-ι-σι*, *χώρα-ι-σι*, &c. The lengthening of the *ā*-stems by *i* was probably much later than that of the *ā*-stems; for we still find fem. loc.s without this *i*, as *θύρā-σι*, *Ἀθήνη-σι*, &c.

III. *Latin Loc. Pl.* This case agrees in form with the dat. and abl. pl. A trace of the Indo-European loc. termi-

\* Consult Bopp's "Comparative Grammar," vol. I., p. 400, *seq.*

† Consult Schleicher, "Compendium," &c., p. 573; and Bopp, "Comparative Grammar," pp. 494, 545.

nation is supposed by some to be found in the plural ending *-is*, which is also used for the dat. and abl. in the *a-* and *o-* declensions : thus we find *foris*, *Athenis*, *Cumis*, *Delphis*, &c., all used as locatives. \*

### §. 148. THE LOCATIVE DUAL.

I. *Sanskrit Loc. Dual.* This case is formed by adding *-ôs* to the stem, final *-ã* becoming *-ê* and neuter stems in *-i* and *-u* being lengthened by *n*: thus we have *marut-ôs*, *kavy-ôs*, *vâri-n-ôs*, *sivay-ôs*, &c., from *marut* (m.), *kavi* (m.), *vâri* (n.), *s'iva* (m., n.), and *s'ivâ* (f.), &c.

II. and III. This case is not found in either Greek or Latin.

### §. 149 THE VOCATIVE SINGULAR.

The vocative singular consisted of the mere stem in Indo-European.

I. *Sanskrit Voc. Sing.* Masc. and fem. stems in *-i* and *-u* gunate the stem-vowel in this case, as *kavê*, *dhênô*, &c., from *kavi* (m.), *dhênu* (f.), &c. Polysyllabic fem. stems in *-î* and *-û* shorten the stem-vowel, as in *nadi*, *radhu*, from *nadî* (f.), *radhû* (f.); fem. stems in *-â* change the stem-vowel into *ê*, as *s'ivê* from *s'ivâ* (f.). Monosyllabic stems ending in a vowel use the nominative for the vocative, as *bhîs*, *nâus*, &c., from *bhî* (f.), *nâu* (f.), &c. Neuter stems in *-i* and *-u* may either gunate the stem-vowel or leave it unchanged, as *vârî* and *vârê* from *vâri* (n.), &c. Neuter stems in *-n* may either retain or lose this consonant, as *nâma* or *nâman* from *nâman* (n.), &c. In all other stems the vocative consists of the mere stem, as *s'iva*, *marut*, *vâk*, &c., from *s'iva* (m., n.), *marut* (m.), *vâk* (f.), &c. In all Skr. vocatives the accent is always placed on the first syllable, as *nâdi*, *bâlin*, &c., from *nadî*, *balin*, &c.

II. *Greek Voc. Sing.*—In guttural and labial stems the vo-

cative is the same as the nominative, as φύλαξ, Κύκλωψ, &c.; we find, however, γύναι from γυναικ. In dental stems the vocative generally is identical with the mere stem, subject to the euphonic laws of the Greek language, as παῖ for παιδ, ἄνα for ἀνακτ, Ἄρτεμι for Ἀρτεμιδ, γέρον for γεροντ, κύον, πάτερ (with accent thrown back as in Skr. Voc. *pítar*), δυσμενής, &c.; we find, however, ποῦς used as the voc.; and in participles ending in -ας, -εις, -ους, and -ων, the voc. is the same as the nom. The voc. of masc. *o*-stems ends in -ε generally; but we also find voc. θεός (beside Θεέ μου, Θεέ μου, Matth. xxvii., 46), φίλος (Od. 3, 375), &c. Masc. stems in -ā (-η) form the voc. in *a* and *η*, as πολῖτα, Κρονίδη, &c. Fem. stems in -ā form voc. In *ā* generally, as θεᾶ, κούρᾱ (Æol. κοῦρᾱ), &c.; and this *ā* often becomes *ǎ*, as in the nom., as μοῦσα, ἀνασσα. In stems ending in -ι, -υ, or a diphthong, the voc. is the mere stem, as μάντι, ταχύ, γραῦ, &c. The fem. voc.s in -οι, such as αἰδοῖ, appear to be related to the nom.s in -ω as the Skr. voc. of fem. *ā*-stems is to the nom.; for -οι (= I. E. -ai): -ω (= I. E. -ā) :: -ε (= I. E. -ai): -ā.

III. *Latin Voc. Sing.* The voc. in Latin is always the same as the nom., except in the case of the masc. *o*-stems, where it ends in -e, as bone, puere (Pl. Most. 947), from puerus = puer, filie (in Livius Andronicus), and later fili, &c. So in Umbrian the voc. of the *o*-stems ends in -e, as Sançie, &c.

### §. 150. THE VOCATIVES PLURAL AND DUAL.

In Sanskrit and Greek the voc. pl. and the voc. dual are the same as the nom. pl. and the nom. dual, except that in Sanskrit the accent is always placed on the first syllable of the voc. In Latin the nom. pl. and the voc. pl. are the same.

## §. 151. PARADIGMS\* OF THE NOMINAL DECLENSION.

## I. Consonantal Stems.

I.—I. E. *vák-* (f.), &c.

|                | Skr.                | Gr.      | L.                               |
|----------------|---------------------|----------|----------------------------------|
| Stem.          | <i>vák-</i> (f.)    | ὄπ (f.)  | <i>vóc-</i> ( <i>vóc-i</i> , f.) |
| Sing. N. V.    | <i>vák.</i>         | ὄπ-ς.    | <i>vóc-s.</i>                    |
| A.             | <i>vák'-am.</i>     | ὄπ-α.    | <i>vóc-em.</i>                   |
| I.             | <i>vák'-á</i>       | —        | —                                |
| D.             | <i>vák'-é.</i>      | —        | <i>vóc-í.</i>                    |
| Ab.            | <i>vák'-as.</i>     | —        | <i>vóc-ē(d).</i>                 |
| G.             | <i>vák'-as.</i>     | ὄπ-ός.   | <i>vóc-is.</i>                   |
| L. (Gr. D.)    | <i>vák'-i.</i>      | ὄπ-ί.    | —                                |
| Plur. N. V.    | <i>vák'-as.</i>     | ὄπ-ες.   | <i>vóc-ēs.</i>                   |
| A.             | <i>vák'-as.</i>     | * ὄπ-ας. | <i>vóc-ēs.</i>                   |
| I.             | <i>vág-bhis.</i>    | —        | —                                |
| D. Ab.         | <i>vág-bhyas.</i>   | —        | <i>vóc-i-bus.</i>                |
| G.             | <i>vák'-ám.</i>     | ὄπ-ών.   | <i>vóc-um.</i>                   |
| L. (Gr. D.)    | <i>vák'-shu.</i>    | ὄπ-σί.   | —                                |
| Dual. N. A. V. | <i>vák'-áu.</i>     | —        | —                                |
| "              | Ved. <i>vák'-á.</i> | ὄπ-ε.    | —                                |
| I. D. Ab.      | <i>vág-bhyám.</i>   | ὄπ-ο-ῖν. | —                                |
| (Gr. G. D.)    |                     |          |                                  |
| G. L.          | <i>vák'-ós.</i>     | —        | —                                |

II.—I. E. *bharant-* (m., f., n.), &c.

|             | Skr.                     | Gr.              | L.                                  |
|-------------|--------------------------|------------------|-------------------------------------|
| Stem.       | <i>bharant-</i> (m., n.) | φέρωντ- (m., n.) | <i>ferent-</i> ( <i>ferent-i.</i> ) |
| "           |                          |                  | (m., f., n.)                        |
| Sing. N. V. | <i>bharan</i> (m.)       | φέρων (m.)       | <i>ferēs</i> (m., f., n.)           |
|             | <i>bharat</i> (n.)       | φέρον (n.)       | —                                   |
| A.          | <i>bharant-am</i> (m.)   | φέρωντ-α (m.)    | <i>ferent-em</i> (m., f.)           |
| "           | <i>bharat</i> (n.)       | φέρον (n.)       | <i>ferens</i> (n.)                  |
| I.          | <i>bharat-á.</i>         | —                | —                                   |
| D.          | <i>bharat-é.</i>         | —                | <i>ferent-í.</i>                    |
| Ab.         | <i>bharat-as.</i>        | —                | <i>ferent-ē(d).</i>                 |
| G.          | <i>bharat-as.</i>        | φέρωντ-ος.       | <i>ferent-is.</i>                   |
| L. (Gr. D.) | <i>bharat-i.</i>         | φέρωντ-ι.        | —                                   |

\* Consult Bopp's "Comparative Grammar," vol. 1., pp. 449-519; and Schleicher's "Compendium," &c., pp. 524-628.

|                | Skr.                       | Gr.            | L.                        |
|----------------|----------------------------|----------------|---------------------------|
| Plur. N. V.    | <i>bharant-as</i> (m.)     | φέρουν-ες (m.) | <i>ferent-ēs</i> (m., f.) |
| „              | <i>bharant-i</i> (n.)      | φέρουν-α (n.)  | <i>ferent-i-a</i> (n.)    |
| A.             | <i>bharat-as</i> (m.)      | φέρουν-ας (m.) | <i>ferent-ēs</i> (m., f.) |
| „              | <i>bharant-i</i> (n.)      | φέρουν-α (n.)  | <i>ferent-i-a</i> (n.)    |
| I.             | <i>bharad-bhis</i> .       | —              | —                         |
| D. Ab.         | <i>bharad-bhyas</i> .      | —              | <i>ferent-i-bus</i> .     |
| G.             | <i>bharat-ām</i> .         | φερόντων.      | <i>ferent-i-um</i> .      |
| I. (Gr. D.)    | <i>bharat-su</i> .         | φέρου-σι.      | —                         |
| Dual. N. A. V. | <i>bharant-āu</i> (m.)     | —              | —                         |
| „              | Ved. <i>bharant-ā</i> (m.) | φέρουν-ε.      | —                         |
| „              | <i>bharant-i</i> (n.)      | —              | —                         |
| „              | <i>bharat-i</i> (n.)       | —              | —                         |
| I. D. Ab.      | { <i>bharad-bhyām</i> .    | φερόντ-ο-ιν.   | —                         |
| (Gr. D. G.)    |                            |                |                           |
| G. L.          | <i>bharat-ōs</i> .         | —              | —                         |

### III. a.—I. F., *manas-* (n.), *durmanas-* (n.), &c.

|                | Skr.                  | Gr.                 | L.                       |
|----------------|-----------------------|---------------------|--------------------------|
| Stem.          | <i>manas-</i> (n.)    | μενες- (n.)         | <i>genes-</i> .          |
| „              | —                     | —                   | ( <i>gener-i-</i> ) (n.) |
| Sing. N. A. V. | <i>manas</i> .        | μένος.              | <i>genus</i> .           |
| I.             | <i>manas-ā</i> .      | —                   | —                        |
| „              | —                     | κράτεσ-φι.          | —                        |
| D.             | <i>manas-ē</i> .      | —                   | <i>gener-ī</i> .         |
| Ab.            | <i>manas-as</i> .     | * —                 | <i>gener-ē</i> (d.)      |
| G.             | <i>manas-as</i> .     | μένους (-νεσ-ος.)   | <i>gener-is</i> .        |
| I. (Gr. D.)    | <i>manas-i</i> .      | μένει (-νεσ-ι.)     | —                        |
| Plur. N. A. V. | <i>manāns-i</i> .     | μένει (-νεσ-α.)     | <i>gener-a</i> .         |
| I.             | <i>manō-bhis</i> .    | ὄχεσ-φι.            | —                        |
| D. Ab.         | <i>manō-bhyas</i> .   | —                   | <i>gener-i-bus</i> .     |
| G.             | <i>manas-ām</i> .     | μενῶν (-νεσ-ων.)    | <i>gener-um</i> .        |
| I. (Gr. D.)    | <i>manas-su</i> .     | μένεσ-σι.           | —                        |
| „              | —                     | μένε-σι.            | —                        |
| Dual. N. A. V. | <i>manas-i</i> .      | μένει (-νεσ-ε.)     | —                        |
| I. D. Ab.      | { <i>manō-bhyām</i> . | μενοῖν (-νεσ-ο-ιν.) | —                        |
| (Gr. D. G.)    |                       |                     |                          |
| G. L.          | <i>manas-ōs</i> .     | —                   | —                        |

III. *b.*—I. E., *durmanas-* (m., f.), &c.

|                | Skr.                      | Gr.                           | L.  |
|----------------|---------------------------|-------------------------------|---|
| Stem.          | <i>durmanas-</i> (m., f.) | <i>δυσμενες-</i> (m., f.)     | <i>vetes-</i><br>( <i>vetes-i-</i> ) (m., f., n.) |
| „              | —                         | —                             | <i>arbos-</i>                                     |
| „              | —                         | —                             | ( <i>arbor-i-</i> ) (f.)                          |
| Sing. N. V.    | <i>durmanās.</i>          | <i>δυσμενής.</i>              | <i>vetus</i> (m., f., n.)                         |
| „              | —                         | —                             | <i>arbos</i> (f.)                                 |
| A.             | <i>durmanas-am.</i>       | <i>δυσμενῇ (-νεσ-α).</i>      | <i>arbor-em.</i>                                  |
| I.             | <i>durmanas-ā.</i>        | —                             | —   |
| D.             | <i>durmanas-ā.</i>        | —                             | <i>arbor-i.</i>                                   |
| Ab.            | <i>durmanas-as.</i>       | —                             | <i>arbor-ē (d).</i>                               |
| G.             | <i>durmanas-as.</i>       | <i>δυσμενους (-νεσ-ος).</i>   | <i>arbor-is.</i>                                  |
| L. (Gr. D.)    | <i>durmanas-i.</i>        | <i>δυσμενεῖ (-νεσ-ι).</i>     | —   |
| Plur. N. V.    | <i>durmanas-as.</i>       | <i>δυσμενεῖς (-νεσ-ες).</i>   | <i>arbor-ēs.</i>                                  |
| A.             | <i>durmanas-as.</i>       | <i>δυσμενεῖς (-νεσ-ας).</i>   | <i>arbor-ēs.</i>                                  |
| I.             | <i>durmanō-bhis.</i>      | —                             | —   |
| D. Ab.         | <i>durmanō-bhyas.</i>     | —                             | <i>arbor-i-bus.</i>                               |
| G.             | <i>durmanas-ām.</i>       | <i>δυσμενῶν (-νεσ-ων).</i>    | <i>arbor-um.</i>                                  |
| L. (Gr. D.)    | <i>durmanas-su.</i>       | <i>δυσμενέσσι.</i>            | —   |
| Dual. N. A. V. | <i>durmanas-āu.</i>       | —                             | —   |
| „              | <i>durmanas-ā.</i>        | <i>δυσμενῇ (-νεσ-ε).</i>      | —   |
| I. D. Ab.      | <i>durmanō-bhyām.</i>     | <i>δυσμενοῖν (-νεσ-ο-ιν).</i> | —   |
| (Gr. G. D.)    |                           |                               |   |
| G. L.          | <i>durmanas-ōs.</i>       | —                             | —   |

IV. *a.*—I. E., *akman-* (m.), &c.

|             | Skr.                | Gr.                     | L.                       |
|-------------|---------------------|-------------------------|--------------------------|
| Stem.       | <i>as'man-</i> (m.) | <i>δαῖμον-</i> (m.)     | <i>homin-</i>            |
| „           | —                   | —                       | ( <i>homin-i-</i> ) (m.) |
| Sing. N.    | <i>as'mā.</i>       | <i>δαῖμων.</i>          | <i>homō.</i>             |
| A.          | <i>as'mān-am.</i>   | <i>δαῖμον-α.</i>        | <i>homin-em.</i>         |
| I.          | <i>as'mān-ā.</i>    | —                       | —                        |
| D.          | <i>as'mān-ē.</i>    | —                       | <i>homin-i.</i>          |
| Ab.         | <i>as'mān-as.</i>   | —                       | <i>homin-ē (d).</i>      |
| G.          | <i>as'mān-as.</i>   | <i>δαῖμον-ος.</i>       | <i>homin-is.</i>         |
| L. (Gr. D.) | <i>as'mān-i.</i>    | <i>δαῖμον-ι.</i>        | —                        |
| V.          | <i>as'mān.</i>      | <i>δαῖμον.</i>          | <i>homō.</i>             |
| Plur. N. V. | <i>as'mān-as.</i>   | <i>δαῖμον-ες.</i>       | <i>homin-ēs.</i>         |
| A.          | <i>as'mān-as.</i>   | <i>δαῖμον-ας.</i>       | <i>homin-ēs.</i>         |
| D. I.       | <i>as'mā-bhis.</i>  | <i>κοτυληδον-ό-φιν.</i> | —                        |

|                | Skr.                  | Gr.                 | L.                  |
|----------------|-----------------------|---------------------|---------------------|
| D. Ab.         | <i>as'ma-bhyas.</i>   | —                   | <i>homin-i-bus.</i> |
| G.             | <i>as'man-ām.</i>     | <i>δαίμόν-ων.</i>   | <i>homin-um.</i>    |
| L. (Gr. D.)    | <i>as'ma-su.</i>      | <i>δαίμο-σι.</i>    | —                   |
| Dual. N. A. V. | <i>as'man-āu.</i>     | —                   | —                   |
| „              | Ved. <i>as'man-ā.</i> | <i>δαίμον-ε.</i>    | —                   |
| I. D. Ab.      | } <i>as'ma-bhyām.</i> | <i>δαίμόν-ο-ιν.</i> | —                   |
| (Gr. D. G.)    |                       |                     |                     |
| G. L.          | <i>as'man-ōs.</i>     | —                   | —                   |

IV. *b.*—I. E. *gnāman-* (n.), &c.

|                | Skr.                  | Gr.                | L.                       |
|----------------|-----------------------|--------------------|--------------------------|
| Stem.          | <i>gnāman-</i> (n.)   | <i>γαλαν-</i> (n.) | <i>nōmen-</i>            |
| „              | —                     | —                  | ( <i>nōmīn-i-</i> ) (n.) |
| Sing. N. A.    | <i>gnāma.</i>         | <i>τάλαν.</i> *    | <i>nōmen.</i>            |
| I.             | <i>gnāmn-ā.</i>       | —                  | —                        |
| D.             | <i>gnāmn-ē.</i>       | —                  | <i>nōmīn-ī.</i>          |
| Ab.            | <i>gnāmn-as.</i>      | — •                | <i>nōmīn-ē (d).</i>      |
| G.             | <i>gnāmn-as.</i>      | <i>τάλαν-ος.</i>   | <i>nōmīn-is.</i>         |
| L. (Gr. D.)    | <i>gnāmn-i.</i>       | —                  | —                        |
| „              | * <i>gnāman-i.</i>    | <i>τάλαν-ι.</i>    | —                        |
| V.             | <i>gnāman.</i>        | <i>τάλαν.</i>      | <i>nōmen.</i>            |
| „              | <i>gnāma</i>          | —                  | —                        |
| Plur. N. A. V. | <i>gnāmān-i.</i>      | <i>τάλαν-α.</i>    | <i>nōmīn-a.</i>          |
| I.             | <i>gnāma-bhis.</i>    | —                  | —                        |
| D. Ab.         | <i>gnāma-bhyas.</i>   | —                  | <i>nōmīn-i-bus.</i>      |
| G.             | <i>gnāmn-ām.</i> ☼    | <i>γαλάν-ων.</i>   | <i>nōmīn-um.</i>         |
| L. (Gr. D.)    | <i>gnāma-su.</i>      | <i>τάλα-σι.</i>    | —                        |
| Dual. N. A. V. | <i>gnāmn-i.</i>       | <i>τάλαν-ε.</i>    | —                        |
| I. D. Ab.      | } <i>gnāma-bhyām.</i> | <i>γαλάν-ο-ιν.</i> | —                        |
| Gr. G. D. •    |                       |                    |                          |
| G. I.          | <i>gnāmn-ōs.</i>      | —                  | —                        |

V. *a.*—I. E. *mātar-* (f.), *patar-* (m.), &c.

|          | Skr.               | Gr.                | L.                      |
|----------|--------------------|--------------------|-------------------------|
| Stem.    | <i>mātar-</i> (f.) | <i>μητερ-</i> (f.) | <i>māter-</i>           |
| „        | —                  | —                  | ( <i>mātr-i-</i> ) (f.) |
| Sing. N. | <i>mātā.</i>       | <i>μήτηρ.</i>      | <i>māter.</i>           |
| A.       | <i>mātar-am.</i>   | <i>μητέρ-α.</i>    | <i>mātr-em.</i>         |
| I.       | <i>mātr-ā.</i>     | —                  | —                       |
| D.       | <i>mātr-ē.</i>     | —                  | <i>mātr-i.</i>          |

|                              | Skr.                  | Gr.                | L.                 |
|------------------------------|-----------------------|--------------------|--------------------|
| Sing. Ab.                    | <i>mātu-s.</i>        | —                  | <i>mātr-ē (d).</i> |
| G.                           | <i>mātu-s.</i>        | <i>μητρ-ός.</i>    | <i>mātr-is.</i>    |
| "                            | —                     | <i>μητέρ-ος.</i>   | —                  |
| L. (Gr. D.)                  | <i>mātar-i.</i>       | <i>μητέρ-ι.</i>    | —                  |
| "                            | —                     | <i>μητρ-ί.</i>     | —                  |
| V.                           | <i>mātar.</i>         | <i>μητερ.</i>      | <i>māter.</i>      |
| Plur. N. V.                  | <i>mātar-as.</i>      | <i>μητέρ-ες.</i>   | <i>mātr-ēs.</i>    |
| A.                           | <i>mātr̥-s (f.)</i>   | —                  | —                  |
| "                            | <i>pitr-n (m.)</i>    | —                  | —                  |
| "                            | Ved. <i>pitar-as.</i> | <i>μητέρ-ας.</i>   | <i>mātr-ēs.</i>    |
| I.                           | <i>mātr-bhis.</i>     | —                  | —                  |
| D. Ab.                       | <i>mātr-bhyas.</i>    | —                  | <i>mātr-i-bus.</i> |
| G.                           | <i>mātr̥-n-ām.</i>    | —                  | —                  |
| "                            | Ved. <i>svasr-ām.</i> | <i>μητέρ-ων.</i>   | <i>mātr-um.</i>    |
| L. (Gr. D.)                  | <i>mātr̥-shu.</i>     | <i>μητρά-σι.</i>   | —                  |
| Dual. N. A. V.               | <i>mātar-āu.</i>      | —                  | —                  |
| "                            | Ved. <i>mātar-āu.</i> | <i>μητίρ-ε.</i>    | —                  |
| I. D. Ab. }<br>(Gr. G. D.) } | <i>mātr-bhyām.</i>    | <i>μητίρ-ο-ιν.</i> | —                  |
| G. L.                        | <i>mātr-ōs.</i>       | —                  | —                  |

V. b.—I. E. *dātār- (m.)*, &c.

|                | Skr.                 | Gr.                | L.                     |
|----------------|----------------------|--------------------|------------------------|
| Stem.          | <i>dātār- (m.)</i>   | <i>δοτηρ- (m.)</i> | <i>datōr-.</i>         |
| "              | —                    | —                  | <i>(datōr-i-) (m.)</i> |
| Sing. N.       | <i>dātā.</i>         | <i>δοτήρ.</i>      | <i>datōr.</i>          |
| A.             | <i>dātār-am.</i>     | <i>δοτήρ-α.</i>    | <i>datōr-em.</i>       |
| I.             | <i>dātr-ā.</i>       | —                  | —                      |
| D.             | <i>dātr-ē.</i>       | —                  | <i>datōr-ī.</i>        |
| Ab.            | <i>dātu-s.</i>       | —                  | <i>datōr-ē (d).</i>    |
| G.             | <i>dātu-s.</i>       | <i>δοτήρ-ος.</i>   | <i>datōr-is.</i>       |
| L. (Gr. D.)    | <i>dātār-i.</i>      | <i>δοτήρ-ι.</i>    | —                      |
| V.             | <i>dātār.</i>        | <i>δοτήρ.</i>      | <i>datōr.</i>          |
| Plur. N. V.    | <i>dātār-as.</i>     | <i>δοτήρ-ες.</i>   | <i>datōr-ēs.</i>       |
| A.             | <i>dāt̥r̥-n.</i>     | <i>δοτήρ-ας.</i>   | <i>datōr-ēs.</i>       |
| I.             | <i>dātr-bhis.</i>    | —                  | —                      |
| D. Ab.         | <i>dātr-bhyas.</i>   | —                  | <i>datōr-i-bus.</i>    |
| G.             | <i>dāt̥r̥-n-ām.</i>  | <i>δοτήρ-ων.</i>   | <i>datōr-um.</i>       |
| L. (Gr. D.)    | <i>dāt̥r̥-shu.</i>   | <i>δοτήρ-σι.</i>   | —                      |
| Dual. N. A. V. | <i>dātār-au.</i>     | —                  | —                      |
| "              | Ved. <i>dātār-ā.</i> | <i>δοτήρ-ε.</i>    | —                      |

|             |   |                    |                    |    |
|-------------|---|--------------------|--------------------|----|
| I. D. Ab.   | } | Skr.               | Gr.                | L. |
| (Gr. D. G.) |   | <i>dātṛ-bhṛām.</i> | <i>δοτήρ-ο-ιν.</i> | —  |
| G. I.       |   | <i>dātṛ-ōs.</i>    | —                  | —  |

VI. *a*.—I. E. *akva-* (m.), *yuga-* (n.)

|                |   | Skr.                        | Gr.                       | L.                       |
|----------------|---|-----------------------------|---------------------------|--------------------------|
| Stem.          |   | <i>as'va-</i> (m.)          | <i>ἵππο-</i> (m.)         | <i>equo-</i> (m.)        |
| "              |   | <i>yuga-</i> (n.)           | <i>ζυγο-</i> (n.)         | <i>jugo-</i> (n.)        |
| Sing. N.       |   | <i>as'va-s</i> (m.)         | <i>ἵππο-ς</i> (m.)        | <i>equu-s</i> (m.)       |
| "              |   | <i>yuga-m</i> (n.)          | <i>ζυγό-ν</i> (n.)        | <i>jugu-m</i> (n.)       |
| A.             |   | <i>as'va-m</i> (m.)         | <i>ἵππο-ν</i> (m.)        | <i>equu-m</i> (m.)       |
| "              |   | <i>yuga-m</i> (n.)          | <i>ζυγό-ν</i> (n.)        | <i>jugu-m</i> (n.)       |
| I.             |   | <i>as'vê-na.</i>            | —                         | —                        |
| "              |   | Ved. <i>as'vâ.</i>          | <i>αὐτό-φι.</i>           | —                        |
| D.             |   | <i>as'vâ-ya.</i>            | <i>ἵππῳ.</i>              | <i>equoi, equo.</i>      |
| Ab.            |   | <i>as'vâ-t.</i>             | —                         | <i>equô-d.</i>           |
| G.             |   | <i>as'va-sya.</i>           | <i>ἵππο-ιο (-ο-συο).</i>  | <i>equi.</i>             |
| "              |   | —                           | <i>ἵππου.</i>             | —                        |
| I.             |   | <i>as'vê.</i>               | <i>οἶκο-ι, μο-ί.</i>      | <i>domi.</i>             |
| V.             |   | <i>as'va.</i>               | <i>ἵππε, ζυγόν.</i>       | <i>equē, jugum.</i>      |
| Pl. N. V.      |   | <i>as'vâ-s</i> (m.)         | <i>ἵππο-ι</i> (m.)        | <i>equē-i, equi</i> (m.) |
| "              |   | Ved. <i>as'vâ-sas</i> (m.)  | —                         | <i>equē-is.</i>          |
| "              |   | —                           | —                         | U. <i>Ikuvinu-s.</i>     |
| "              |   | —                           | —                         | O. <i>Nuvlanu-s.</i>     |
| "              |   | <i>yugâ-ni</i> (n.)         | —                         | —                        |
| "              |   | Ved. <i>yugâ</i> (n.)       | <i>ζυγά</i> (n.)          | <i>juga</i> (n.)         |
| A.             |   | <i>as'vâ-n</i> (m.)         | <i>ἵππο-υς</i> (m.)       | <i>equô-s.</i>           |
| "              |   | —                           | Kret. <i>πραιγυτράνς.</i> | —                        |
| "              |   | <i>yugâ-ni</i> (n.)         | —                         | —                        |
| "              |   | Ved. <i>yugâ</i> (n.)       | <i>ζυγά</i> (n.)          | <i>juga</i> (n.)         |
| I.             |   | <i>as'vâ-is.</i>            | —                         | —                        |
| "              |   | Ved. <i>as'vê-bhis.</i>     | <i>θεό-φιν.</i>           | —                        |
| D. Ab.         |   | <i>as'vê-bhyas.</i>         | —                         | <i>equi-s, duô-bus.</i>  |
| G.             |   | <i>as'vâ-nâm.</i>           | <i>ἵππων (-πο-ων).</i>    | <i>(equu-m.)</i>         |
|                |   | —                           | —                         | <i>equô-rum.</i>         |
| L. (Gr. D.)    |   | <i>as'vê-shu.</i>           | <i>ἵππο-ι-σι.</i>         | —                        |
| "              |   | —                           | <i>ἵππο-ι-ς.</i>          | —                        |
| Dual. N. A. V. |   | <i>as'vâu (-va-au)</i> (m.) | —                         | —                        |
| "              |   | Ved. <i>as'vâ</i> (m.)      | <i>ἵππω</i> (m.)          | <i>duo</i> (m., n.)      |
| "              |   | <i>yugê</i> (n.)            | <i>ζυγώ</i> (n.)          | —                        |
| I. D. Ab.      | } | <i>as'vâ-bhṛām.</i>         | <i>ἵππο-ιν.</i>           | —                        |
| (Gr. G. D.)    |   |                             |                           |                          |
| L. G.          |   | <i>as'va-y-ōs.</i>          | —                         | —                        |

VI. b.—I. E. *akvā* (f.), &c.

|                | Skr.                          | Gr.                  | L.                      |
|----------------|-------------------------------|----------------------|-------------------------|
| Stem.          | <i>as'vā-</i> (f.)            | <i>χωρα-</i> (f.)    | <i>equa-</i> (f.)       |
| Sing. N.       | <i>as'vā.</i>                 | <i>χώρα.</i>         | <i>equa.</i>            |
| A.             | <i>as'vā-m.</i>               | <i>χώρᾱ-v.</i>       | <i>equa-m.</i>          |
| I.             | <i>as'va-y-i.</i>             | —                    | —                       |
| „              | Ved. <i>as'vā.</i>            | —                    | —                       |
| „              | —                             | <i>βιη-φι.</i>       | —                       |
| D.             | <i>as'vā-y-i-i.</i>           | —                    | —                       |
| „              | Ved. <i>as'vā-i</i> (-vā-ai.) | <i>χώρᾱ (-pa-ai)</i> | <i>equā-i</i> (-vā-ai)  |
| „              | —                             | —                    | <i>equae.</i>           |
| Ab.            | <i>as'vā-y-ā-s.</i>           | —                    | <i>praeā-d.</i>         |
| „              | —                             | —                    | <i>O. totā-d.</i>       |
| G.             | <i>as'va-yas.</i>             | <i>χώρα-ς.</i>       | <i>familia-s.</i>       |
| „              | —                             | —                    | <i>Prosepna-is.</i>     |
| „              | —                             | —                    | <i>Diana-vs.</i>        |
| „              | —                             | —                    | <i>equa-i, equae.</i>   |
| L. (Gr. D.)    | <i>as'vā-y-am.</i>            | <i>χαμα-ί.</i>       | <i>Romae.</i>           |
| „              | —                             | —                    | <i>O. via-i.</i>        |
| V.             | <i>as've.</i>                 | —                    | —                       |
| „              | Ved. <i>as'va.</i>            | <i>χώρα.</i>         | <i>equa.</i>            |
| Pl. N. V.      | <i>as'vā-z.</i>               | <i>χώραι.</i>        | <i>equai, equae.</i>    |
| „              | —                             | —                    | <i>O. scripta-s.</i>    |
| „              | —                             | —                    | <i>U. urta-s.</i>       |
| A.             | <i>as'vā-s.</i>               | <i>χώραι-ς.</i>      | <i>equa-s, O. vā-s.</i> |
| I.             | <i>as'vā-bhis.</i>            | —                    | —                       |
| D. Ab.         | <i>as'vā-bhyas.</i>           | —                    | <i>equā-bus, equi-s</i> |
| „              | —                             | —                    | <i>O. diumpa-is.</i>    |
| G.             | <i>as'vā-n-ām.</i>            | <i>χωρά-ων.</i>      | <i>equā-rum.</i>        |
| „              | Ved. <i>as'vā-m.</i>          | <i>χώρῶν.</i>        | —                       |
| L. (Gr. D.)    | <i>as'vā-su.</i>              | <i>χώρα-ι-σι.</i>    | —                       |
| „              | —                             | <i>χώρα-ι-ς.</i>     | —                       |
| Dual. N. A. V. | <i>as've.</i>                 | <i>χώρα.</i>         | —                       |
| I. D. Ab.      | <i>as'vā-bhyām.</i>           | <i>χώρα-ιν.</i>      | —                       |
| (Gr. G. D.)    |                               |                      |                         |
| G. L.          | <i>as'vā-y-ūs.</i>            | —                    | —                       |

VII.—I. E. *avi-* (m., f.), &c.

|             | Skr.                               | Gr.                                | L.                                  |
|-------------|------------------------------------|------------------------------------|-------------------------------------|
| Stem.       | <i>avi-</i> (m., f.)               | <i>πολι-</i> (f.), <i>κι-</i> (m.) | <i>οvi-</i> (f.), <i>fasci</i> (m.) |
| "           | <i>vāri-</i> (n.)                  | —                                  | <i>mari-</i> (n.)                   |
| "           | <i>suk'i-</i> (m., f., n.)*        | <i>ιδρι-</i> (m., f., n.)          | <i>levi</i> (m., f., n.)            |
| Sing. N.    | <i>avi-s</i> (m., f.)              | <i>πόλι-ς</i> (f.)                 | <i>οvi-s</i> (f.)                   |
| " *         | <i>vāri</i> (n.)                   | <i>ιδρι</i> (n.)                   | <i>mare</i> (n.)                    |
| A.          | <i>avi-m</i> (m., f.)              | <i>πόλι-ν</i> (f.)                 | <i>οvi-m</i> (f.)                   |
| "           | <i>vāri.</i>                       | <i>ιδρι</i> (n.)                   | <i>mare</i> (n.)                    |
| I.          | <i>avi-n-ā</i> (m.)                | —                                  | —                                   |
| "           | <i>avy-ā</i> (f.)                  | —                                  | —                                   |
| "           | <i>vāri-ṇ-ā</i> (n.)               | —                                  | —                                   |
| D.          | <i>avay-é</i> (m., f.)             | —                                  | —                                   |
| "           | <i>avy-āi</i> (f.)                 | —                                  | <i>ovi.</i>                         |
| "           | <i>vāri-ṇ-é</i> (m.)               | —                                  | —                                   |
| Ab.         | <i>avé-s</i> (m., f.)              | —                                  | <i>ovē-d, mari-d.</i>               |
| "           | <i>avy-ās</i> (f.)                 | —                                  | —                                   |
| "           | <i>vāri-ṇ-as</i> (n.)              | —                                  | —                                   |
| G.          | <i>avé-s</i> (m., f.)              | <i>πόλι-ως.</i>                    | <i>ovi-s.</i>                       |
| "           | <i>avy-ās</i> (f.)                 | Hom. <i>πόλη-ος.</i>               | —                                   |
| " *         | <i>vāri-ṇ-as</i> (n.)              | <i>πόλι-ος.</i>                    | —                                   |
| L. (Gr. D.) | <i>av-āu</i> (m., f.)              | <i>πόλι-ϊ.</i>                     | —                                   |
| "           | <i>av'ām</i> (f.)                  | <i>πόλει, πόλι.</i>                | —                                   |
| "           | <i>vāri-ṇ-i</i> (n.)               | Hom. <i>πόλη-ϊ.</i>                | —                                   |
| V.          | <i>avé</i> (m., f.)                | <i>πόλι</i> (f.)                   | <i>ovi-s</i> (f.)                   |
| "           | <i>vāri</i> (n.), <i>varé</i> (n.) | <i>ιδρι</i> (n.)                   | <i>mare</i> (n.)                    |
| Pl. N. V.   | <i>avay-as</i> (m., f.)            | Hom. <i>πόλη-ες</i> (f.)           | <i>ovē-s</i> (f.)                   |
| "           | —                                  | <i>πόλι-ες</i> (f.)                | —                                   |
| "           | —                                  | <i>πόλι-ς</i> (f.)                 | —                                   |
| "           | <i>vāri-ṇ-i.</i>                   | <i>ιδρι-α</i> (n.)                 | <i>mari-a</i> (n.)                  |
| A.          | <i>avi-n</i> (m.)                  | <i>πόλι-ας</i> (f.)                | <i>ovē-s</i> (f.)                   |
| "           | <i>avi-s</i> (f.)                  | <i>πόλι-ς</i> (f.)                 | —                                   |
| "           | —                                  | Hom. <i>πόλη-ας</i> (f.)           | —                                   |
| "           | <i>vāri-ṇ-i.</i>                   | <i>ιδρι-α.</i>                     | <i>mari-a</i> (n.)                  |
| I.          | <i>avi-bhīd.</i>                   | —                                  | —                                   |
| D. Ab.      | <i>avi-bhyas.</i>                  | —                                  | <i>ovi-δus.</i>                     |
| G.          | <i>avi-n-ām.</i>                   | <i>πολι-ων.</i>                    | <i>ovi-um.</i>                      |
| "           | —                                  | <i>πόλι-ων.</i>                    | —                                   |

\* Neuter adjectives in *-i* in Sanskrit in the D. Ab. G. and L. sing., and in the G. and L. dual may follow the declension either of *vāri* (n.), or of *avi* (m.).

|                | Skr.                 | Gr.                    | L. |
|----------------|----------------------|------------------------|----|
| L. (Gr. D.)    | <i>avi-shu.</i>      | <i>πόλι-σι.</i>        | —  |
| "              | —                    | <i>πόλε-σι.</i>        | —  |
| "              | —                    | Hom. <i>πολί-εσσι.</i> | —  |
| Dual. N. A. V. | <i>avī (m., f.)</i>  | <i>πόλι-ε.</i>         | —  |
| "              | <i>vāri-n-ī (n.)</i> | <i>πόλε-ε.</i>         | —  |
| I. D. Ab.      | <i>avi-bhyām.</i>    | <i>πολέ-ο-ιν.</i>      | —  |
| (Gr. D. G.)    |                      |                        |    |
| G. L.          | <i>avy-ōs.</i>       | —                      | —  |
| "              | <i>vāri-n-ōs.</i>    | —                      | —  |

VIII.—I. E. *sīnu-* (m.), &c.

|             | Skr.                   | Gr.                    | L.                       |
|-------------|------------------------|------------------------|--------------------------|
| Stem.       | <i>sīnu-</i> (m.)      | <i>νέκυ-</i> (m.)      | <i>fructu-</i> (m.)      |
|             | <i>dhēnu-</i> (f.)     | <i>συ-</i> (f.)        | <i>manu-</i> (f.)        |
|             | <i>tālu-</i> (n.)      | <i>μέθυ-</i> (n.)      | <i>cornu-</i> (n.)       |
|             | <i>mrdu-</i> (m., n.)* | <i>γλυκυ-</i> (m., n.) | —                        |
| Sing. N.    | <i>sīnu-s</i> (m.)     | <i>νέκυ-ς</i> (m.)     | <i>fructu-s</i> (m.)     |
| "           | <i>tālu</i> (n.)       | <i>μέθυ</i> (n.)       | <i>cornu-</i> (n.)       |
| A.          | <i>sīnu-m</i> (m.)     | <i>νέκυ-ν</i> (m.)     | <i>fructu-m</i> (m.)     |
| "           | <i>tālu</i> (n.)       | <i>μέθυ</i> (n.)       | <i>cornu</i> (n.)        |
| I.          | <i>sīnu-n-a</i> (m.)   | —                      | —                        |
| "           | <i>dhēnu-ā</i> (f.)    | —                      | —                        |
| "           | <i>tālu-n-d</i> (n.)   | —                      | —                        |
| D.          | <i>sunav-ē</i> (m.)    | —                      | <i>fructu-i.</i>         |
| "           | <i>dhēnav-ē</i> (f.)   | —                      | <i>fructu.</i>           |
| "           | <i>dhēnu-āi</i> (f.)   | —                      | —                        |
| "           | <i>tālu-n-ē</i> (n.)   | —                      | —                        |
| Ab.         | <i>sūnō-s</i> (m.)     | —                      | <i>magistratū-d.</i>     |
| "           | <i>dhēnō-s</i> (f.)    | —                      | —                        |
| "           | <i>dhēnu-ās</i> (f.)   | —                      | —                        |
| "           | <i>tālu-n-as</i> (n.)  | —                      | —                        |
| G.          | <i>sūnō-s</i> (m.)     | <i>νέκυ-ος.</i>        | <i>fructu-os.</i>        |
| "           | <i>dhēnō-s</i> (f.)    | <i>γλυκέ-ος.</i>       | <i>fructū-s.</i>         |
| "           | <i>dhēnu-ās</i> (f.)   | <i>ἄστε-ως</i> (n.)    | <i>O. castrou-s</i> (n.) |
| "           | <i>tālu-n-as</i> (n.)  | —                      | <i>U. trifor.</i>        |
| L. (Gr. D.) | <i>sūn-āu</i> (m.)     | <i>νέκυ-ι.</i>         | —                        |
| "           | <i>dhēn-āu</i> (f.)    | <i>ἄσται.</i>          | —                        |
| "           | <i>dhēnu-ām</i> (f.)   | —                      | —                        |

\* Neuter adjectives in -u in Sanskrit in the D. Ab. G. and L. sing., and in the G. and L. dual may follow the declension either of *tālu* (n.), or *sīnu* (m.).

|                | Skr.                     | Gr.                           | L.                   |
|----------------|--------------------------|-------------------------------|----------------------|
| L. (Gr. D.)    | <i>tálu-n-i</i> (n.)     | —                             | ● —                  |
| V.             | <i>śūnô</i> (m.)         | <i>νέκυ.</i>                  | <i>fructu-s</i> (m.) |
| "              | <i>dhēnô</i> (f.)        | —                             | —                    |
| "              | <i>tālô</i> (n.)         | —                             | —                    |
| "              | <i>tálu</i> (n.)         | <i>μίθυ.</i>                  | <i>cornu</i> (n.)    |
| Pl. N. V.      | <i>śūnav-as</i> (m.)     | <i>γλυκεῖς</i> (-κεF-ες) (m.) | <i>fructu-s</i> (m.) |
| "              | <i>dhēnav-as</i> (f.)    | <i>ἑγγέλεις</i> (f.)          | —                    |
| "              | <i>tálu-n-i.</i>         | <i>γλυκέ-α</i> (n.)           | <i>cornu-a</i> (n.)  |
| "              | —                        | <i>ἄστη</i> (-τεF-α) (n.)     | —                    |
| Plur. A.       | <i>śūnū-n</i> (m.)       | <i>νέκυ-ας.</i>               | <i>fructū-s</i> (m.) |
| "              | Vcd. <i>śūnv-as</i> (m.) | <i>γλυκεῖς</i> (-κεF-ας).     | —                    |
| "              | <i>dhēnū-s</i> (f.)      | <i>ἑγγελεῖς</i> (f.)          | —                    |
| "              | <i>tālū-n-i</i> (n.)     | <i>γλυκέ-α</i> (n.)           | <i>cornu-a</i> (n.)  |
| "              | —                        | <i>ἄστη</i> (n.)              | —                    |
| I.             | <i>śūnu-bhis.</i>        | —                             | —                    |
| D. Ab.         | <i>śūnu-bhyas.</i>       | —                             | <i>fructi-bus.</i>   |
| "              | —                        | —                             | <i>portu-bus.</i>    |
| G.             | <i>śūnū-n-ām.</i>        | <i>νεκύ-ων.</i>               | <i>fructu-um.</i>    |
| "              | —                        | <i>γλυκέ-ων.</i>              | —                    |
| L. (Gr. D.)    | <i>śūnu-śhu.</i>         | <i>νεκύ-εσσι.</i>             | —                    |
| "              | —                        | <i>νέκυ-σσι.</i>              | —                    |
| "              | —                        | <i>νέκυ-σι.</i>               | —                    |
| "              | —                        | <i>γλυκέ-σι.</i>              | —                    |
| Dual. N. A. V. | <i>śūnū</i> (m.)         | <i>νέκυ-ε.</i>                | —                    |
|                | <i>dhēnū</i> (f.)        | <i>γλυκέ-ε.</i>               | —                    |
|                | <i>tálu-n-i.</i>         | —                             | —                    |
| I. D. Ab.      | <i>śūnu-bhyām.</i>       | <i>γλυκέ-ο-ιν.</i>            | —                    |
| (Gr. D. G.)    |                          |                               |                      |
| G. L.          | <i>śūnr-ós.</i>          | —                             | —                    |

IX.—I. E. *nāu-* (f.), *gvau-* (m., f.), &c.

|       | Skr.                | Gr.                                | L.  |
|-------|---------------------|------------------------------------|---|
| Stem. | <i>nāu-</i> (f.)    | <i>νᾶυ-</i> (f.), Ion. <i>νευ-</i> | <i>nav-i-*</i> (f.)                               |
| "     | <i>gô-</i> (m., f.) | <i>βου-</i> (m., f.)               | <i>bo-</i> ( <i>δου-</i> ), <i>bou-i-</i> (m. f.) |

\* There were no diphthongal stems in Old Latin; diphthongs were avoided either by the addition of *i*, as in *nav-i*, or by dropping the second vowel, as in *bo-*. Greek diphthongal stems, such as Ἀχιλλεύς, &c., when introduced into Latin, became, in early times, *Aciles*, &c.; while in later times either the Greek de-

|                | Skr.                      | Gr.                         | L.                            |
|----------------|---------------------------|-----------------------------|-------------------------------|
| Sing. N.       | <i>nâu-s, gâu-s.</i>      | <i>ναῦ-ς, βοῦ-ς.</i>        | <i>navi-s, bo-s, bov-i-s.</i> |
| A.             | <i>nâr-am.</i>            | <i>νη-α, ναῦ-ν, νῑ-α.</i>   | <i>nave-m.</i>                |
| "              | <i>gâ-m.</i>              | <i>βοῦ-ν.</i>               | <i>bove-m.</i>                |
| I.             | <i>nâv-â, gav-â.</i>      | —                           | —                             |
| "              | —                         | <i>ναῦ-φι.</i>              | —                             |
| D.             | <i>nâr-î, gar-î.</i>      | —                           | <i>navi, bovi.</i>            |
| Ab.            | <i>nâr-as, gô-s.</i>      | —                           | <i>nave-(d), bove-(d).</i>    |
| G.             | <i>nâr-as.</i>            | <i>νη-ός, νε-ώς, νε-ός.</i> | <i>navi-s.</i>                |
| "              | <i>gô-s.</i>              | <i>βο-ός.</i>               | <i>bovi-s.</i>                |
| L. Gr. D.      | <i>nâv-î, gav-î.</i>      | <i>νη-î, νε-î, βο-î.</i>    | —                             |
| V.             | <i>nâu-s, gâu-s.</i>      | <i>ναῦ, βοῦ.</i>            | <i>navi-s, bovi-s.</i>        |
| Plur. N. V.    | <i>nâr-as, gâr-as.</i>    | <i>νη-ες, νῑ-ες, βό-ες.</i> | <i>nave-s, bove-s.</i>        |
| A.             | <i>nâr-as.</i>            | <i>νη-ας, ναῦ-ς, νῑ-ας.</i> | <i>nave-s.</i>                |
| "              | <i>gâr-as, gâ-s.</i>      | <i>βό-ας, βοῦ-ς.</i>        | <i>bove-s.</i>                |
| I.             | <i>nâu-bhis, gâ-bhis.</i> | <i>ναῦ-φιν.</i>             | —                             |
| D. Ab.         | <i>nâu-bhyas.</i>         | —                           | <i>navi-bus.</i>              |
| "              | <i>gô-bhyas.</i>          | —                           | <i>bû-bus, bū-bus.</i>        |
| G.             | <i>nâr-âm.</i>            | <i>νη-ων, νε-ων.</i>        | <i>navi-um.</i>               |
| "              | <i>gav-âm.</i>            | <i>βο-ων.</i>               | <i>bo-um.</i>                 |
| Plur. I.       | <i>nâu-shu.</i>           | <i>νη-ε-σσι, νηυ-σί.</i>    | —                             |
| "              | —                         | <i>ναυ-σί, νῑ-ε-σσι.</i>    | —                             |
| "              | <i>gô-shu.</i>            | <i>βό-ε-σσι, βου-σί.</i>    | —                             |
| Dual. N. A. V. | <i>nâr-âu, gâr-âu.</i>    | —                           | —                             |
| "              | <i>nâr-â, gâr-â.</i>      | <i>νη-ε, βό-ε.</i>          | —                             |
| I. D. Ab.      | <i>nâu-bhîyam.</i>        | <i>νη-ο-ϊν.</i>             | —                             |
| (Gr. D. G.)    | <i>gô-bhîyam.</i>         | <i>βο-ο-ϊν.</i>             | —                             |
| G. I.          | <i>nâr-ôs, gav-ôs.</i>    | —                           | —                             |

elension was followed, or the diphthong was resolved into its two constituent elements, and the word passed over to the *o*-declension; thus we find N. *Achille-us*, *Orphe-us*, &c.; G. *Achille-ï*, *Orphe-ï*, *Ulixë-ï*, &c.

## CHAPTER IX.

## ADJECTIVES.\*

## §. 152. THE COMPARATIVE DEGREE.

THE stem of the comparative degree was formed in Indo-European either by the addition of *-yant* (= *yan-ta*), or by that of *-tara* to the stem of the positive. *Yant* and *tara* may be derived either from verbal or from pronominal roots. Those writers who connect them with verbal roots derive *-yant* from I. E. root *ya* (to go), whence come Skr. *yā* (id.), Gr. *lé-vai*, &c.; and *-tara*, from I. E. root *tar* (to cross over); whence come Ved. *tiras* (across), Z. *taró* (id.), Kelt. *tair* (id.), L. *trans*, Goth. *thair-h*, E. *through*. These roots signify a *progression*, and consequently their addition to the positive heightens the idea implied by it. It is, however, better to derive these suffixes from pronominal roots, and to connect *-yant* with the common suffixes *-ant*, *-m-ant*, *-v-ant*, and to resolve *-tara* into the elements *ta* and *ra*—the latter of which by itself sometimes expresses the idea of the comparative, as in Skr. *avara* (posterior), *apara* (id.), Goth. *afar*, G. *aber*, L. *sup-er-us*, &c. As regards the relative age of these suffixes, it is probable that *-yant* is the older of the two, for it is a primary suffix, i. e. it must be attached immediately to the root, whereas *-tara* is a secondary suffix, and consequently must be of later introduction than those primary suffixes to which it is attached. We find, however, traces of *-tara* being used as a primary suffix in Skr. *antara* (interior, other), *antar* (within), L. *inter*, Goth. *anthar* (other), E. *other*, all from pronominal root *an*, Gr. *φίλ-τερος*, &c.

\* The declension of the adjectives has been already noticed in Chapter VIII., and consequently we have here only to do with the degrees of comparison.

## §. 153. THE SANSKRIT COMPARATIVE.

I. *The form in -yâns and -iyâns.* We find -yâns (l. -yasi, n., -yas) in Ved. *nav-yâns*, from *nara* (new), Skr. *sthê-yâns*, from *sthira* (firm); *sphê-yâns*, from *sphira* (swollen); *s'rê-yâns*, from *s'rîla* (lucky); *prê-yâns*, from *priya* (dear); *g'yâ-yâns*, from R. *g'yâ* (to grow old, overpower), the positive of which is not found, but which is supposed by Bopp to have been *g'yâ-yin*, formed from *g'yâ*, as *yâ-yin* (going), from *yâ*; *bhû-yâns*, from *bhûri* (much), according to Bopp, or from *bahu* (much), according to Benfey. In *sthêyâns*, *sphêyâns*, *s'rêyâns*, and *prêyâns* the *i* of the positive is *gunated*; but we may also explain the *ê* in the first two of these forms by adding -*iyâns* to what were probably the original forms of their positives (omitting the ending -*ra*) *sthara* (from R. *sthâ* = L. *sta*), and *sphara* (from R. *sphâ-y*, c. f. Gr. *σφαίρα* = *σφαρῖα*): this latter explanation is, however, more improbable than the preceding one, for the stem-vowel of the positive, if it be *i* or *u*, is *gunated* when final -*ra* is lost, as we shall see further on; and it is also possible that the form -*iyâns* had not been developed from -*yâns* before *sphara* and *stha* had become *sphira* and *sthira*. The form -*iyâns* arose from -*yâns* through the influence of *y*, which has a tendency to generate *i* before it, as in the Pâli *nadiyâ* = Skr. *nadyâ*, Instr. of *nadi*. That -*yâns* is older than -*iyâns* appears at once from the cognate languages; thus, beside Skr. *mah-iyâns*, from Ved. *maha* (great), we find Z. *mas'-yas*, Gr. *μεῖζον* = *μεγ-γον*, L. *majôr* = *mag-yôr*, from I. E. *magh* (to be mighty); beside Skr. *âs'-iyâns*, from *âs'u* (swift), we find Z. *âs'-yas*, Gr. *ᾠκτον* = *ᾠκ-γον*, L. *oc-iôr*. Before -*iyâns* the final vowel of the positive stem is suppressed, and the vowel of its first syllable, if susceptible of *gunation*, receives it, except this vowel be *r*, which becomes *ra*, or *a*, which is unaltered. Thus we have *alp-iyâns*, from *alpa* (small), *pâp-iyâns* (= Gr.

κακ-ιον), from *pápa* (bad), *var-iyáns* (= Gr. ἀρε-ιον), from *vara* (good), &c. ; *sádhi-iyáns*, from *sádhu* (good), *lagh-iyáns* (= Gr. ἑλασσον = ἑλαχ-γον), from *laghu* (light), *gar-iyáns* (= Gr. βαρ-ιον), *mrád-iyáns* (= Gr. βραδ-ιον), from *mrdu* (soft), *prath-iyáns*, from *prthu* (= Gr. πλατυ), &c. ; -*ra* is lost in *kshép-iyáns*, from *kshipra* (swift), &c. ; as in Gr. αἰσχ-ιον, from αἰσχρο, &c. ; -*la* is lost in *s'rē-yáns*, from *s'rī-la* (lucky) ; -*ya* is lost in *prē-yáns*, from *priya* (dear) ; adjectives in -*mant*, -*vant*, -*vin*, and -*tār* lose these suffixes before -*iyáns*.

II. *The form in -tara.* This suffix is attached immediately to the positive stem, as in *punya-tara*, from *punya* (pure), *bali-tara*, from *balin* (strong), final *n* being lost, beside Ved. *supathin-tara*. In words with two stems -*tara* is attached to the weak form, and in words with three, to the intermediate one, as *mahat-tara*, from *mahat*, the weak form of *mahánt* (strong), and *vidvat-tara*, from *vidvat*, the intermediate form of *vidvāns* (Gr. εἰδοτ), beside Ved. *vidush-tara*, from the weakest form of *vidvāns*, &c. In the pronoun we find this suffix constantly employed, as in *ka-tara* (uter), from *ka* (= I. E. *kva*, L. *qui-s*), *ya-tara* (uter), from *ya* (= Gr. ὁ-), *i-tara*, from *i* (= L. *i-s*, whence *i-terum* = Ved. *i-taram*), *ēka-tara* (one of two), from *ēka* (one), &c. From the preposition *ut* (up) is formed *ut-tara* (higher) = Gr. ὑσ-τερο.

#### §. 154. THE GREEK COMPARATIVE.

I. *The form in -ιον.* In adding this termination to the stem of the positive final *o*, *u* and *po* are omitted, as in φιλ-ιον, from φιλο, κα-κ-ιον, from κακο ; ὀλιζον = ὀλιγ-γον, from ὀλιγο ; ἡδ-ιον, from ἡδυ ; θασσον = ταχ-γον, from ταχυ ; ἑλασσον = ἐλαχ-γον, from ἐλαχυ ; γλυκ-ιον, and γλυσσον (σσ = κy), from γλυκυ, βραδ-ιον and βρασσον (σσ = δy), from βραδυ ; παχ-ιον and πασσον (σσ = χy), from παχυ ; μασσον = μακ-γον, from μακ-πο ; αἰσχ-ιον, from αἰσχρο, &c.

II. *The form in -τερο.* In adding this termination to the

stem of the positive, the stem-vowel is generally retained, -τερο being a secondary suffix, as in φιλω-τερο, from φιλο (the stem-vowel here being lengthened as the penult is short), κουφο-τερο, from κουφο; γλυκυ-τερο, from γλυκυ; χαρις-τερο, from χαρις, the weak form of χαριεντ, &c. In φιλ-τερο this suffix is primary, being attached directly to the root.

By adding -τερο to the preceding form of the comparative suffix -ιον = γαμ-s, we obtain the forms -εσ-τερο, -ισ-τερο, and -αι-τερο;\* as in ἀφθον-εστερο, from ἀφθονο; λαλ-ιστερο, from λαλο; φιλ-αιτερο, from φιλο, &c.; the stem-vowel being lost in these cases. In -αι-τερο it is possible that α may belong to the stem, and so represent the original α from which ο was developed; Benfey, however, considers -αι to be an old locative termination, to which the comparative suffix was attached. We find the two forms -ιον and -τερο combined also in ἄσσο-τέρω, from ἄσσον = αγχ-γον, and in the Hom. ἐπασσύτεροι from the same root. The suffix -τερο is added also to prepositions, numerals, and pronouns; as προ-τερο, from προ; δευ-τερο, from δύο; ἐ-τερο, from ἐ; πο-τερο and κο-τερο, from I. E. *kno*, &c. It is also employed in other cases where only opposition in space is implied, as in δεξι-τερο, ἀρις-τερο, &c. In ἀλλό-τριος we find -τερο augmented by the suffix -ιο = I. E. -γα.

### §. 155. THE LATIN COMPARATIVE.

I. *The form in -iōs (m. f. n.), later -iūs (m. f.), -ius (n.).*  
 \*The masc. -ior and the neut. -ius were both originally -iōs; the neuter -iūs is still found in Plautus. This suffix is both primary and secondary in Latin; in adding it to vocalic positive stems the stem-vowel is always lost. Thus we have *sapient-ior*, from *sap-ient*; *prob-ior*, from *prob-o*; *lev-ior*, from *lev-i = leg-u-i*; *major = mag-jor*, *ma-jus*, and *mag-is = mag-ius*,

\* From this form is probably derived the Modern Greek comparative in -ητερος, as καλ-ήτερος from καλός, κακ-ήτερος from κακός, &c.

from R. *mag*, whence *mag-nus*; *min-or* = *min-jor*, from R. *min*; *plūs* = *plo-jus*, from I. E. *par* or *pra* (to fill), whence *ple-nus*, *ple-rique*; Gr. *πλε-ίων*, &c.

II. *The form in -tero.* This suffix is not used in Latin to form regular comparatives. It is, however, of frequent occurrence: as in *dexter* = Gr. *δεξιτερό-ς*; *u-ter* = Goth. *hva-thar* (which of two), from I. E. *kva* (who); *neu-ter*, *al-ter*, from the same root, as Gr. *ἄλλο-ς* = *ἀλ-γος*, L. *al-ius*, &c.; *ce-teru-s* from same root as L. *-ce* in *hi-ce*, *ci-s*, *ci-tra*; Gr. *ἐ-κεῖ*, *ἐ-κεῖ-νο-ς*. We find *-ter* also employed to form prepositions: as in *præ-ter*, *prop-ter*, *in-ter*; and adverbs, as in *sub-ter*, *audac-ter*, *pari-ter*, &c. It appears as *-trō* in *ul-trō* and *-intrō*; and as *-trā* in *ex-trā*, *in-trā*, *con-trā*, &c. These forms in *-trā* are supposed by some to be old instrumentals, just as in Skr. the instr. *antarēṇa* is used adverbially; this view is, however, wrong, for they are really old ablatives, as we see from O. L. *extrād* = *extrā*.

In many cases both forms of the comparative suffix are united in Latin. Thus in *sin-is-tero-*, *min-is-tero-*, *mag-is-tero-*, we have *-is-tero* = I. E. *-yāns* + *tara*; and in *dēx-ter-ior*, *in-ter-ior*, *ci-ter-ior*, &c., we have *-ter-ior* = I. E. *-tara* + *yāns*. With *sin-is-tero*, &c., may be compared the Gr. *λαλ-ισ-τερο*, &c.

### §. 156. THE INDO-EUROPEAN SUPERLATIVE.

In Indo-European the idea of the superlative was expressed by adding either *-ma* or *-ta* to the stem of the positive. After the first separation that occurred in the I. E. family of languages, these suffixes were either used separately, or united together, or doubled, or *ta* and *tata* were added to *-yāns*. Thus we find *-ta* in the stems Skr. *shash-tha* = Gr. *ἐκ-το*, L. *quar-to*, &c.: *-ma* in Skr. *nava-ma* (= L. *no-no* by assimilation for *nomo*), Skr. *ava-ma* (low) from *ava* (down), which is, perhaps, connected with Gr. *αὖ*, *αὖ-τός*, L. *au-t*,

*au-tem*, Skr. *agri-ma* (first), from *agra* (a point), L. *sum-mo* for *sup-mo*, &c.; *-tama\** in Skr. *punya-tama* from *punya* (holy), and other superlatives, in *pra-thama* (beside Gr. *πρω-το*, L. *pri-mo*), &c., L. *op-timo*, &c.; *-mata* in Gr. *ἑβδο-ματο*† (beside *ἑβδο-μο*), *πυ-ματο* (for *πυσ-ματο*, from *πυς*, an Æolicised form of a root *πoc* which is connected with Skr. *pas'k'ût*, after, Gr. *ὤ-πισ-ω*, L. *pos-t*, *po-ne* = *pos-ne*, O. *pos-mo-m* = L. *postremum*), and especially in the Irish ordinals, as *secht-mad* (the 6th), *ocht-mad* (the 8th), &c.; *-mama*, also in the Irish forms *uaisli-mem*, from *uasal* (high); *doir-bem*, from *dóir* (a slave), with *b* for *m*, &c.; *-tata* in Gr. *κουφο-τατο* and other superlatives; *-yâns + ta* = *ish-tha*, in Skr. *mah-ishtha* (= Gr. *μεγ-ιστο*, &c., and = *ισ-το* in Gr. *ὠκ-ιστο*, &c.; *-yâns + ta + ta* = *-ισ-τα-το*, *-εσ-τα-το*, *-αι-τα-το* in Gr.

#### §. 157. THE SANSKRIT SUPERLATIVE.

The form in *-ta* is found in some ordinal numbers, as *katur-tha* = Gr. *τεταρ-το*, &c. *Ish-tha* is of common occurrence, and is added to the stem in the same way as the comp. suffix *îyâns*, as in *pap-ishtha* (= Gr. *κακ-ιστο*), &c. *Ma* is four-<sup>th</sup> in *ashta-ma* (the 8th), *nava-ma* (the 9th), *madhya-ma* (middle), &c. *Tama* is the usual superlative suffix, as in *mahat-tama*, &c.; it is also found in the ordinals, as in *vins'ati-tama* (the 20th), &c. From the superlative *gyêshtha* (eldest) is also formed the double superlative *gyêshtha-tama*.

\* Bopp derives *-tama* from *-tara + ma*, and *-taro* from *-taro + ro*; he had previously suggested *tan* (to stretch) as the root of both forms; but it is much more probable that they arise from the pronominal roots *ta* and *ma*, as these roots are separately found expressing the idea of the superlative.

† Lottner and others consider that initial *m* of the suffixes *-ma* and *-mata* belongs sometimes to the stem, and that the words noticed in the text should be divided thus: Skr. *ashtam-a*, *navam-a*; Gr. *ἑβδομ-ο*, *ἑβδομ-ατο*; Ir. *sechtm-ad*, &c.

## §. 158. THE GREEK SUPERLATIVE.

The form in *-to* is found in some ordinal numbers, as *τεταρ-το*, &c. *Ισ-το* is added to stem in the same way as the comp. suffix *-ιον*, as in *ἡδ-ιστο*, from *ἡδύ*, &c. *Τα-το* is the usual superlative suffix, as in *φιλ-τατο*, &c.; added to the comparative suffix *-γάνς*, it appears as *-αι-τατο*, *-εσ-τατο*, *-ισ-τατο*, in *ἡσυχ-αι-τατο*, *σωφρον-εσ-τατο*, *πτωχ-εσ-τατο*, &c. from *ἡσυχος*, *σωφρον*, *πτωχος*, &c. We find *-μο* in *ἐβδο-μο* and *προ-μο* and *-μα-το* in *ἐβδο-ματο* and *πυ-ματο*.

## §. 159. THE LATIN SUPERLATIVE.

The form in *-to* is found in some ordinal numbers, as *quin-to*-, &c.; also in *quo-to*-, from I. E. *kva*. *Mo-* is found in *i-mo*-, *sum-mo*-, \* &c. In *min-i-mo*- and *plur-i-mo*-, it is added to the comparative suffix *-ios*, of which the vowel *i* alone is left; and we find it added to the other comparative suffix *-ter* in *ex-tre-mo*- beside *ex-timo*-, *pos-tre-mo*- beside *pos-tu-mo*-. The form *-timo* or *-tumo* is found in *op-timo*-, and *op-tumo*-, *dex-timo*-, *maximo*- = *mag-timo*-, *pessimo*- = *pep-timo*-, *proximo*-† = *prop-timo*-, *liberrimo*- = *liber-timo*-, *facillimo*- = *facil-timo*-, &c. This suffix is also used in other words without expressing any superlative idea, as in *fini-timo*-, *mari-timo*-, &c. *Timo* is added to the comparative suffix *-ios*, which here becomes *is*, and *-is-timo* becomes *-issimo*-, as in *prob-issimo*-, *levissim-o*, *pot-issimo*-, &c.

\* *I-mo* is a superlative stem formed from the preposition *in*, and *summo* is a superlative of *sub*.

† This is Benfey's view, who connects the word with Skr. *pāpa* (bad), L. *peccare*; *pejor* is, in his view, for *pejor*. Lottner, however, connects it with an I. E. root *pi* (to hate), whence E. *fiend*, &c.

## CHAPTER X.

## NUMERALS.

## §. 160. THE CARDINAL NUMBERS.\*

I.—Ind. Eur.: the idea of unity was probably marked by the demonstrative stem *i-* or its gunated form *ai-*.

Sanskrit: *é-ka-* from *é-* = I. E. *ai-*, the gunated form of the demonstrative stem *i-*, and *ka-*.†

Greek: nom. sing. m., *εἷς* = *éiv-*, f. *μία*, n. *ἓν*; *éiv* may be = I. E. *sam*, or *sa*, whence Gr. *\*ἄ-πας*, Kret. *ἄμ-akis* (once), Tarent. *ἄμ-aris* (id.), Skr. *sa-krt* (id.), L. *sem-el*, *sim-plex*, *sin-guli*, and *μία* would then be = *sam-ya*. In Hesiod we find *ἔεις* for *εἷς*, where the initial *ε* must represent a lost digamma; and if this be so, then it is possible that *Feiv* may be an older form of the stem, with which we may compare the Lith. *vėna-s* (one), and E. *one* (as pronounced). If Bopp's explanation of Lith. *vėnas* (Comp. Gram. II., p. 57) be correct, then it is also possible that Gr. *Feiv* may be = an older *μεiv*, whence *μείv*. In *ἰῶ* (= *éiv*), and *ἴα* (= *μία*), the demonstrative stems *i* and *u* are united. Gr. *οἶ-φο* (whence *οἶο-ς*) is identical with Z. *aeva* (one). Gr.

\* For the declension of the Sanskrit numerals, consult Bopp's "Sanskrit Grammar," pp. 157-161.

† *Ka-* (one) is found, according to Bopp, in L. *cocles* (one-eyed), from *ca*, and *oculus* and *cæcus* = *ca-icus*, from *ca* and a supposed *ocus* (eye), whence *oculus*, a diminutive; and in Goth. *halta-* (lame), from *ha* = I. E. *ha*, and *lith* (to go); *halba-* (half), from *ha*, and *leiban* (to remain); *haihs* (one-eyed). Curtius connects L. *cæcus* and Goth. *haihs* with I. E. root *sha* to shade; whence Skr. *k'hâyâ* for *shâyâ*, Gr. *σκι-ά*, *σκο-ιά* (*σκοτεινά*, Hesych.) = I. E. *skaya*, *σκη-νή*, *σκό-ρος*, E. *shade*, *shy*, &c.: *cocles* he considers to be a diminutive from the same root.

οἰ-νό-ς, οἰ-νή (one) correspond also exactly to O. L. *oinō-s*, Goth. *aln-s*; *oi-* in οἰνός and οἶος, being from the stem *i-*.

Latin : *uno-s* = O. L. *oino-s*, from stem *i-*.

II.—Ind.-Eur. : *dva-*.\*

Sanskrit : *dva-*, *dvi-* (in compounds); *dvīs* (twice).

Greek : δύο, δυνώ, G. δυοῖν, δυνώ, Att. δυνεῖν, Dor. δυνῶν,

Mod. Gr. δυνονῶν, D. δυοῖν, δυνώ, Dor. δυοσί, Æol.

\*δύεσσι; δίς (twice) for δFις; δισσό-ς for δFι-τγο-ς; δι-ά (originally meaning *between* and then *through*), for δFι-α, Instr. of stem δFι, as E. *between* is from *twain*; διοίω, διοίς (two), from stem δFι-ο; δι- (in compounds); δέ (lit. *secondly*).

Latin : m. *duo*, f. *duae*, n. *duo* (and *dua* in vulgar Latin),

Acc. m. *duo*, *duos*; f. *duas*; *binī* for *dvini*; *bis* for *dvīs*;

\* Various methods of explaining the numerals have been suggested; but, except in the case of the first numeral, which is probably derived from a demonstrative stem, none of these explanations are satisfactory. Thus *tri-* is derived from I. E. *tar* (to cross); but how is the idea of *crossing* connected with the idea of *three* more than with that of *four*? *Kvankva* is supposed to be the reduplication of a root *kvan*, which is said to mean to *seize*, whence are derived Skr. *s'van* (a dog), Gr. *κνον*, &c., and therefore to have originally meant the five fingers, as that part of the body with which we seize anything; but what proof have we that such a root ever existed? Skr. *pañkān* is again connected with *pāñi* (the hand), but *pāñi* is probably for *par-ni* from *par* (to fill). The I. E. form of *ten* is said to be *dva-kvan* from *dva-* (2), and *kvan-* (5); but there are no traces of the two *v* s in any I. E. language. Again, it is suggested that the root of *dakan* is I. E. *daḱ* (to point out), whence come Gr. *δείκνυμι*, *δάκρυλος*; L. *digitus*, Skr. *dis'* (to point out), &c. *Kantam* probably meant *host*, *multitude*; but its origin is obscure. Other methods of explaining the numerals have been suggested, but so absurd as scarcely to deserve notice; thus Skr. *tisar* (fem. three) is derived from *tri* (3), and *stri* (a woman)! *Aśtāu* (8) is for *aśvāu* (two horses), &c.! It is also impossible to connect the I. E. numbers with the Shemitic; the likeness that exists between the names of numbers *six* and *seven* is merely accidental.

*du-plum, du-plex*. N. U. *duf* (duos), *duir* (duobus),  
O. U. *tuves* (duobus), N. U. *du-* (in compounds), L.  
*bi-* (id.).

### III.—Ind. Eur. : *tri-*.

Sanskrit : m. n. *tri-*, f. *tisar-* for *titar-*, according to Bopp,  
a reduplicated form of *tri-*; *tri-s* (thrice).<sup>\*</sup>

Greek : m. f., *τρεῖς*, Dor. *τρί-ς*; n. *τρί-α*, from *τρι-*;  
*τρί-ς*.

Latin : m. f., *tres*, n. *tri-a*, from *tri-*; *ter*; O. U. *tri-* in *tribū* (triplicatio).

### IV.—Ind.-Eur. : *kvatvar-*.

Sanskrit : m. n., *k'atvār-*, *k'atur-*; f. *k'atasar-* (according to  
Bopp, from *ka*, 'one, and *tasar*, three); *k'atur* (four  
times).

Greek : m. f., *τέσσαρες, τέτταρες*; n., *τέσσαρα, τέτταρα*;  
Dor. *τέρορες* (ο = Fa), Bæot. *πέτταρες*, Æol. *πέσουρες*,  
Hom. *πίσουρες* (ε becoming ι through the influence of  
υ); New Ion. and Mod. Gr. *τέσσερες*; *τετρά-κις*.

Latin : *quatuor* and *quattuor*, *quadru-* (in compounds), *qua-*  
*ter*; U. *petur-* (in compounds), O. *petor-a*, whence  
*Petr-ejus*, *petiro-* (in compounds).

### V.—Ind.-Eur. : *kvankva-*.

Sanskrit : *pañk'an-*.

Greek : *πέντε* for *πεντα* found in *πεντά-κις*, for I. E. *-an*  
becomes *-a* in Greek; Æol. *πέμπτε*, the gen. of which  
occurs in *μαχέων ἀπὸ πέμπων*<sup>\*</sup> (Alcæi fragmenta, 26).

Latin : *quinque*, O. *pontis*, whence *Pontius* (= L. *Quinctius*),  
*Pomp-ejus*: *p* = I. E. *kv* as in W. *pump* (5), &c.

### VI.—Ind.-Eur. : *ksvaks-*; from this\*complicated form alone can be deduced the various words expressing the idea of *six*, in the Indo-European languages. Thus in Z. *khsva-s* we find the initial *ksw* still preserved; *ks* is found in Ossetian *achsz*† and the initial *sh* in Skr.

\* "Ahrens de Dialectis Æolicis et Pseudæolicis," p. 245.

† The *a* in *achsz* is merely prosthetic, as *ε* in *ἐχθρός*.

*shash* arises from *s* through the influence of the preceding *k*; *sv* is found in Afghan *spash* (Afgh. *sp* = Skr. *sv*), and in Welsh *chwech* (W. *chw* = Skr. *sv*\*); *s* is found in Gr. *ξξ* (aspirate = *s*), L. *sex*, Ir. *sé*; *v* is found in Dor. *ῥέξ*, Armenian *wež*.

Sanskrit: *shash-*.

Greek: *ξξ*, Dor. *ῥέξ*, Mod. Gr. *ξξι*.

Latin: *sex*.

VII.—Ind.-Eur.: *saptam-* or *saptan-*.

Sanskrit: *saptan-*.

Greek: *ἑπτά*, Mod. Gr. *ἑφτά*.

Latin: *septem*. Bopp supposes that the final *m* in *septem*, *novem*, and *decem* is due to the influence of the corresponding ordinal numbers, *septimo-* = Skr. *saptama-*, &c.

VIII.—Ind.-Eur.: *aktam-*, or, according to Bopp, *aktáu-*.

Sanskrit: *ashtan-* (after analogy of *saptan-*), nom. *ashtáu*, apparently a dual form, as *s'iváu* from *s'iva* (m.), 8 being equal to twice 4, and therefore being the dual of 4.

Greek: *ὀκτώ*, Dor. *ὀκτώ* (the aspirate being added as in Fr. *huit*, from L. *octo*, New Pers. *hest* = Skr. *ashtáu*), Mod. Gr. *ὀχτώ*.

Latin: *octo*.

IX.—Ind.-Eur.: *navam-* or *navan-*.

Sanskrit: *navan-*.

\* Greek: *ἑννέα*, Dor. *ἐννέα*, Mod. Gr. *ἐννιά*.

Latin: *novem*.

X.—Ind.-Eur.: *dakam-* or *dakan-*.

Sanskrit: *das'an-*.

Greek: *δέκα*.

Latin: *decem*, U. *deçem*.

XI.—Ind.-Eur.: *ai-* (?) *dakam-* (this and the other I. E. numbers up to XIX. were probably two separate words).

\* Thus we have W. *chwegyr* = Skr. *s'vas'rû* (where *s'v* = I. E. *sv*), W. *chwuer* (O. W. *chwior*) = Skr. *svasar*.

Sanskrit: *ékâ-das'an-*.

Greek: *έν-δεκα, δέκα εἷς*.

Latin: *un-decim*.

XII.—Ind.-Eur.: *dva-dakam-*.

Sanskrit: *dvâ-das'an-*.

Greek: *δύ-δεκα, δυνώ-δεκα, δυο-καί-δεκα* (gen. *δυοκαιδέκων*, Alcæi Fragmenta,\* 98), *δέκα δύο*.

Latin: *duo-decim*, U. *desen-du-f* (acc. pl.).

XIII.—Ind.-Eur.: *tri-dakam-*.

Sanskrit: *trayô-das'an-*.

Greek: *τρις-καί-δεκα, δεκα-τρεις*.

Latin: *tre-decim*.

XIV.—Ind.-Eur.: *kvatvar-dakam-*.

Sanskrit: *k'atur-das'an-*.

Greek: *τεσσαρες-καί-δεκα, τεσσαρα-καί-δεκα*.

Latin: *quatuor-decim*.

XV.—Ind.-Eur.: *kvankva-dakam-*.

Sanskrit: *pañh'a-das'an-*.

Greek: *πεντε-καί-δεκα*.

Latin: *quin-decim*.

XVI.—Ind.-Eur.: *kvraks-dakam-*.

Sanskrit: *shô-das'an-*.

Greek: *έκ-καί-δεκα*.

Latin: *se-decim, sex-decim*.

XVII.—Ind.-Eur.: *saptam-dakam*

Sanskrit: *sapta-das'an-*.

Greek: *έπτα-καί-δεκα*.

Latin: *septem-decem*.

XVIII.—Ind.-Eur.: *aktam-dakam-*.

Sanskrit: *ashtâ-das'an-*.

Greek: *όκτω-καί-δεκα*.

Latin: *decem et octo* [*duo-de-viginti*].

XIX.—Ind.-Eur.: *navam-dakam-*.

\* "Ahrens de Dialectis Æolicis et Pseudæolicis," p. 255.

Sanskrit : *nava-das'an-* [*ûna-vins'ati-*].

Greek : ἑννεα-καί-δέκα.

Latin : *decem et novem* [*un-de-viginti*].

XX.—Ind.-Eur. : *dvi-dakan-ta-* or *dvi-dakan-ti-*.

Sanskrit : *vins'ati-* = *dvīn-das'a-ti-*. The nasal in *dvīn* is probably the remains of the nom. pl. case-ending of a neuter stem *dvi-*.

Greek : ἑξήκονσι, ἑξήκονσι, Boeot. *ἑξήκατ*, Lacon. *βέξκατ*. Hesychius notices *ἑκάντιν* (*ἑξήκοντιν*), which is remarkable on account of the retention of the *ν* before *τ*.

Latin : *viginti*, *g* taking the place of the original *c*, which is retained in *vicesimus*, *vicies*.

XXX.—Ind.-Eur. : *tri-dakan-ta-*, or *tri-dakan-ti-*.

Sanskrit : *trīns'ati-* or *trīns'at-*.

Greek : *τριάκοντα* (gen. *τριάκόντων*, Hes. Op. et D. 694) a neuter pl. the first *a* being lengthened. The remaining decades XL.-XC. are also neuters pl.

Latin : *triginta* for *triūginta*, a neuter pl., as are also the remaining decades.

XL.—Ind.-Eur. : *kvatvar-dakan-ta-*, or *kvatvar-dakan-ti-*.

Sanskrit : *k'atvāriṁs'at-*.

Greek : *τεσσαράκοντα*, Ion. *τεσσαρήκοντα*, Dor. *τετρώκοντα* ;  
Ion. -η- and Dor. -ω- = -ā-.

Latin : *quadrāginta*.

L.—Ind.-Eur. : *kvantva-dakan-ta-*, or *kvantva-dakan-ti-*.

Sanskrit : *pañk'ās'at-*.

Greek : *πεντάκοντα*. -η- = -ā-.

Latin : *quinqūāginta*.

LX.—Ind.-Eur. : *kṣvaks-dakan-ta-*, or *kṣvaks-dakan-ti-*.

Sanskrit : *śashti-*.

Greek : *ἑξήκοντα*. -η- = -ā-.

Latin : *sexāginta*.

LXX.—Ind.-Eur. : *saptan-dakan-ta-*, or *saptan-dakan-ti-*.

Sanskrit : *saptati-*.

Greek : ἑβδομήκοντα from ordinal stem ἑβδομο- ; -η- = -ā-.  
 Latin : *septuāginta* for *septumāginta* from ordinal stem *septumo-*.

LXXX.—Ind.-Eur. : *aktáu-dakan-ta-*, or *aktáu-dakan-ti-*.

Sanskrit : अष्टति-.

Greek : ὀγδοήκοντα from ordinal stem ὀγδοο-, with -η- for -ā- ; Hom. ὀγδῶκοντα.

Latin : *octo-ginta*.

XC.—Ind.-Eur. : *naṣan-dakan-ta-*, or *navan-dakan-ti-*.

Sanskrit : नवति-.

Greek : ἐνενήκοντα, Hom. ἐννῆκοντα, from an ordinal stem ἐνενο- = L. *nono-* ; -η- = -ā-.

Latin : *nonāginta* from ordinal stem *nono-*.

C.—Ind.-Eur. : *kantam*.

Sanskrit : स'ता-म.

Greek : ἑκατό-ν, ἑ being = ἕν (one).

Latin : *centu-m*.

CC-DCCCC.—Ind.-Eur. : here no compound forms were found, but the constituent numerals were kept separate, as in E. *two hundred*, &c.

Sanskrit : here also the constituent numerals were either kept separate, as in *dvē s'atē* (200), or the compound numeral was formed in usual way, as *dvīs'ata-* (200), &c.

Greek : διακόσιο- (m. -οι, f. -αι, n. -α) ; Ion. διηκοσιο-, Dor. διακαριο-, &c.

Latin : *ducento-* (m. -i, f. -æ, n. -a) ; *trecento-*, *quadringento-*, *quadrin-* being formed after the analogy of *septin-* ; *quingento-* for *quinc-gento-* ; *sexcento-*, *septingento-*, *octingento-*, where *octin-* is either formed after analogy of *septin-*, or else = I. E. *aktan-* ; *nongento-* from ordinal stem *nono-*.

M.—Ind.-Eur. : ——— ?

Sanskrit : *sahasra-* (m. and n.).

Greek : χίλιο- (m. -οι, f. -αι, n. -α), Lesb. χελλιο-, Bæot. χειλιο-, Dor. χηλιο-. Bopp suggests that this stem

may be connected with Skr. *sahasra*-, the original Greek form having been *σαχιλιο*-, then *αχιλιο*-, and finally *χιλιο*-; *r* became *λ*, and the preceding *s* was assimilated in the Lesb. form, or became *ι*, as in Bœot., and a new suffix *-ιο* = Skr. *-ya* was added. Schleicher, on the other hand, considers *χελγο*- to have been the original stem, which would be identical with an I. E. *ghar-ya*-.  
 Latin: *milli*- (*mille*, *milli-a*).

### §. 161. THE ORDINAL NUMBERS.

In Indo-European the ordinals appear to have been formed by adding either *-ta* or sometimes *-ma* to the cardinal stems; *pra-ta*- or *pra-ma*- (1st), *dva-ta*- (2nd), *tri-ta*- (3rd), *kvatvar-ta*- (4th), *kvankva-ta*- (5th), *ksvaks-ta*- (6th), *sapta(m)-ma* or *sap-tan-ta* (7th), *akta(m)-ma*- or *aktāv(m)a*- (8th), *navan-ta*- or *nava(m)-ma*- (9th), *dakan-ta*- or *dukan(m)-ma*- (10th). The ordinal decades were formed in a similar way. The ordinals from 11 to 19, &c., were formed of two separate words, as *prata-dakanta*- (11th = 1st + 10th), &c.

In Sanskrit we have *prathama*- (1st), from preposition *pra* and superlative suffix *-tama*; *dvitīya*- (2nd) for *dvitya* (Gr. *δισσο*-), = *dva-ta-ya*-; *trītyā*- (3rd) for *tritya*- (Gr. *τρισο*-) = *tri-ta-ya*-; *katurtha*- and *turīya*- (4th) = (*k'a*)*turīya*-, perhaps for (*k'a*)*turtīya*-, the second *t* being thrown out to distinguish this form more completely from *trītya*-, unless *ya*- is used here by itself instead of *ta-ya*-; *pañkāma*-, Ved. *pañkātha*- (5th); *shashtha*- (6th), *saptama*-, Ved. *saptatha*- (7th), *ashṭama*- (8th), *navama*- (9th), *das'ama*- (10th)\*. In the numerals compounded with *das'an* final *-an* is lost, and the suffix *a*- added; thus we have *ekādas'a*- (11th), &c. The cardinal stems end-

\* Lottner considers that the ordinals, Skr. *saptama*-, *ashṭama*-, *navama*-, *das'ama*-, Gr. *ἑβδομο*-, L. *septimo*-, *decimo*-, &c., are formed simply by the addition of *a* to the cardinal stems, *saptam*, *ashṭam*, &c.

ing in *-ti* or *-t* either add *-tama* or *-a*; in the latter case *viñs'ati* and the numerals ending in *-t* lose *t-* with the preceding vowel, while *shashti*, *saptati*, *as'iti*, and *navati* only lose final *i*: thus *viñs'atitama-* or *viñs'a-* (20th); *triñs'attama-* or *triñs'a-* (30th); *k'atvârñs'attama-* or *k'atvârñs'a-* (40th); *pañk'ûs'attama-* or *pañk'ûs'a-* (50th); *shashtitama-* or *shashta-* (60th), &c. From *s'ata* and *sahasra* we have *s'atutama-* (100th), *sahasratama-* (1000th).

In Greek we have *πρωτο-* (1st), Dor. *πρατο-*, Ep. *προμο-*, from *πρό* (whence *πρίν* = *προ-ιον*, *πρόσσω* = *προτιω*, *πρότερος*, &c.), *δευτερο-* (2nd) = I. E. *dvatara-*; *τριτο-*, *τριτατο-*, Æol. *τερτο-* (3rd); *τεταρτο-*, *τετρατο-* (4th); *πempto-* (5th); *έκτο-* (6th); *έβδομο-*, *έβδοματο-* (7th); *όγδοο-* (8th) = *ογδοFo-* from *όκτοF* = I. E. *aktāv*: *ένατο-*, *έννατο-*, *είνατο-* (9th); *δεκατο-* (10th); *ένδεκατο-* (11th); *δωδεκατο-*, *δυοδεκατο-* (12th); *τρισκαϊδεκατο-*, *τριτο- και δεκατο-* (13th), &c.; *είκοστο-* (20th)\*; *τριᾱκοστο-* (30th); *τεσσαρακοστο-*, Dor. *τετρωκοστο-* (40th), &c.; *έκατοστο-* (100th); *χιλιοστο-* (1000). The termination *-στο* is, perhaps, connected with the superlative ending *-ιστο*, initial *ι* being lost. The same ending is found in *έκαστο-*, *ποστο-*, *όποστο-*.

In Latin we have *primo-* (1st) for *pro-imo-*, according to Curtius, or for *pris-mo-*, according to Pott, *pris* being for *prius*; *secundo-* (2nd), from R. *sequ* (to follow), whence *sequor*; *tertio-* (3rd); *quarto-* (4th), for *quatuorto-*; *quinto-* (5th), for *quincto-*; *sexto-* (6th); *septimo-* (7th); *octavo-* (8th), from *octav* = I. E. *aktāv*; *nono-* (9th), for *novimo-*, *n* being assimilated to the preceding *n*; *decimo-* (10th); *undecimo-* (11th); *duodecimo-* (12th); *tertio- decimo-* (13th), &c.; *vigesimo-*, *vicesimo-*, (20th), for *vicensimo-* = *vicent-timo-*; *trigesimo-*, *tricesimo-* (30th), for *tricensimo-* = *tricent-timo-*, &c.; *centesimo-* (100th) following the analogy of the preceding decades, &c.; *millesimo-* (1000th).

## CHAPTER XI.

## §. 162. PRONOUNS.

IN the pronouns of the first and second person we find no distinction of gender in any of the Indo-European languages.\* This may be accounted for by supposing that they were developed at a period preceding the introduction of this distinction, as is probable, for they express ideas that are among the first to suggest themselves to man. Their antiquity also accounts for the fact, that there is such a variety in the different pronominal roots employed to express these ideas, and also for the fact that these pronominal roots have become so disguised in various ways, that it is impossible to analyze the greater portion of them, and consequently impossible to reproduce the original Indo-European forms from which they are derived.†

No distinction of gender is found also in the reflexive pronoun; all the other pronouns have three genders.

No vocative case is found in the pronouns.

In Sanskrit in all the pronouns the real stem is not used in compounds, but in the pronouns of the first and second person the abl. sing. or pl. is used, and in the others the nom. sing. neut.

\* In Sanskrit the pronouns in their acc.s. pl. *asmān*, *yushmān*, and their Vedic nom.s pl. *asmê*, *yushmê*, appear to be masculine in form. In the White Yagur-Veda (XI., 47) we find a remarkable exception in the fem. acc. pl. *yushmâs*.

† Consult an Essay by Dr. C. Lottner, "On the Forms and Origin of the Pronouns of the First and Second Persons," in the Transactions of the Philological Society (1859, Part I.).

### §. 163. THE PRONOUN OF THE FIRST PERSON.

The stem of this pronoun was originally *ma-*, connected either with the I. E. verbal root *ma* (to think), whence Skr. *man* (id.), or with the pronominal root *ma-* (this), whence Skr. *i-ma-* (id.). *Ma* is of universal occurrence in the verbal inflexion, as in Skr. *as-mi* (I am), *i-ma-s* (we go), &c.; Gr. *εἰ-μι*, *ἴ-με-ν*, &c.; L. *su-m*, *i-mu-s*, &c.

Beside the stem *ma-* we also find in Indo-European a stem *agham(a-)*, whence Skr. *aham* (I.), or *agam(a)*, whence Goth. *ik* (I.), Gr. *ἐγώ*. As *ma-* has been connected with the verbal root *ma* (to think), so *agam(a-)*, from which, after the separation of the European branches of the Indo-European from the Asiatic, the Sanskrit *agham*, and finally *aham*, was developed, has been derived from the I. E. verbal root *ag* (to move),\* whence Skr. *ag'* (id.), Gr. *ἄγω*, &c.: *agam-a* would then be divided thus: *ag* (a verbal root) + *a-* (a pronominal demonstrative root) + *ma-* (the preceding stem of *I*). Bopp, however, considers that in Skr. *aham* an initial *m* has been lost, and supposes that the first portion of the word is merely the stem *ma-* (I.).

The other explanation, suggested by Bopp, is much preferable to either of the preceding, viz.: that the initial *a-* is

\* In this case *agama-* would mean "*I the mover*," and hence "*I*," as the first idea we have of *a mover*, *a cause*, is derived from the power we have of *willing*. The I. E. root *ag* also meant "*to speak*," whence Skr. *ah* (which also passed through the stage *agh*)?; L. *ad-ag-ium*, *ajo* = *ag-io*, Goth. *af-aik-a* (I deny); and here *agama-* would mean "*I the speaker*." Although it is possible that both forms of this stem, *agama-* and *aghama-*, existed in Indo-European, it is nevertheless more probable that *aham* is a special Sanskrit form developed from *agama-*, through the stage *aghama-*. We find a few other examples of a Skr. *h* being = an I. E. *g*; thus we have Skr. *hanu-s* (the jaw), Gr. *γίγν-ς*, L. *gena*, Goth. *kinnu-s*; Skr. *maha-t* (great), Gr. *μῆγα-ς*, Goth. *mikil-s*.

the demonstrative stem \* *a-* (this). *A-ga-ma-* (or *a-gha-ma-*) would then be resolved into the three pronominal stems, *a-* (this); *ga-* (or *gha-*), which is connected with Vcd. *ghá*, *gha*, *há*; Skr. *ha*, Gr. *γε*, *γα* (in Dor. *ἔγωγα*, Bæot. *ἰωνγα*); Gōth. *-k* in the acc.s sing. *mik* (me), *thuk* (te), *sik* (se), O. H. G. *-h* in the acc.s pl. *unsih* (nos), *iwi*h (vos), and *ma-* (the other stem of the first person).

### Nominative Singular.

Ind.-Eur. : *agam(a)-*.†

Skr. : *aham*.

Gr. : *ἔγώ*, Dor. *ἔγών*, *ἔγώνη*, *ἔγώνγα*; Bæot. *ἰών*, *ἰώνει*, *ἰώνγα*. Here *ω* = I. E. *ǎ*, but the cause of this change is unknown.

L. : *egō* (with *ō* as in Greek), and later *egō*.

\* So in the Sanskrit Dramas we find *ayañ g'anañ* (lit. this person) used to express the first personal pronoun. Compare also the use of *L. hic*, and of *this* in vulgar English.

• † Lottner (in the essay quoted in p. 315) considers that there were two periods in prehistorical Indo-European times: firstly, a period when *M* was solely the characteristic of the first person; secondly, a period when *M* became restricted to the oblique cases of the singular. Both periods had been gone through before our ancestors separated. "In the historical times," he writes, "the difference of singular and plural, and of the nominative '*I*,' as opposed to the oblique case *Me* is, upon the whole, preserved; but here and there we observe a tendency to come back to the preprimitive—if I may say so—simplicity." . . . The tendency, that *M* has to return to the nom. sing. we find "in some of the English dialects which partly replace *I* by *me*, in the *moi* of the French, in the *men* of the New Persian . . . in the *mē* of the Old Irish." . . . "Secondly, we find the *m* of the first person extended to the plural. This we have in some German and Norse dialects (*mer*, *mir* for *wir* is common about Thuringia; *mer* is also sometimes used in Old Norse), in the New Iranian languages almost throughout (*we* is in New Persian *ma*, Armenian *meq*, Ossetian *max*), and in Modern Greek *μεῖς*." I have observed similar phenomena in the Italian dialect of San Remo.

*Accusative Singular.*

Ind.-Eur. : *mǎ-m*.

•Skr. : *mā-m*, *mât*. *Mâm* in form is a fem. acc. Bopp suggests either that *â* was first developed in *mât* to compensate for the loss of the final *m*, and that it was borrowed by *mâm* from *mât*, or that *mâm* is for *ma-ha-m*, *ha* being = Gr.  $\gamma\epsilon$ .

Gr. :  $\mu\acute{\epsilon}$ ,  $\dot{\epsilon}\mu\acute{\epsilon}$  (the first  $\epsilon$  being only prosthetic), Dor.  $\dot{\epsilon}\mu\acute{\epsilon}$ .

L. : *mē* for *mem* = *mim* from stem *mi-*, final  $\bar{e}$  being lengthened to compensate for loss of *m*. In Old Latin *med* was used for *me*, as in *Novios Plautios med Romai fecid* (C. I. L. I. n. 54). *Mehe* was also written in Old Latin for *me*. Bücheler suggests that *mehe* may be = Gr.  $\dot{\epsilon}\mu\acute{\epsilon}\gamma\epsilon$ , Goth *mih*.

*Instrumental Singular.*

Ind.-Eur. : ——— ?

Skr. : *mayâ* = *ma + i + â* = *ma + a + â*.

*Dative Singular.*

Ind.-Eur. : *ma-bhyam*.

Skr. : *ma-hyam*.

Gr. : Dor.  $\dot{\epsilon}\mu\acute{\iota}\nu$ ,  $\dot{\epsilon}\mu\acute{\iota}\nu\eta$ ,  $\dot{\epsilon}\mu\acute{\iota}\nu\gamma\alpha$ ;  $-\dot{\iota}\nu$  =  $^{-}\epsilon\text{-}\phi\dot{\iota}\nu$  = *-a-bhyam*.

L. : *mi-hei*, *mi-hi*, from St. *mi-*; U. *me-he*.

*Ablative Singular.*

Ind.-Eur. : *ma-d* or *ma-t*.

Skr. : *ma-t*, Ved. *mama-t*, a reduplicated form.

L. : *mē*, O. L. *mē-d* from St. *mi-*.

*Genitive Singular.*

• Ind.-Eur. : ——— ?

Skr. : *mama*, a reduplication of stem, with loss of case-ending.

Gr. :  $\mu\omicron\upsilon$ ,  $\epsilon\mu\omicron\upsilon$  ; Ep.  $\epsilon\mu\epsilon\iota\omicron$  (=  $\epsilon\mu\epsilon\text{-}\sigma\gamma\omicron$ ) ; Ion.  $\epsilon\mu\epsilon\omicron$  ; Dor.  $\epsilon\mu\epsilon\upsilon$ ,  $\mu\epsilon\upsilon$  ; Lacon.  $\epsilon\mu\epsilon\upsilon\nu\eta$  ; Syrac.  $\epsilon\mu\iota\omicron$ ,  $\epsilon\mu\iota\omega$ . In Dor.  $\epsilon\mu\epsilon\omicron\varsigma$ ,  $\epsilon\mu\omicron\upsilon\varsigma$ ,  $\epsilon\mu\epsilon\upsilon\varsigma$  ; Syrac.  $\epsilon\mu\omega\varsigma$  ; the gen. case-ending  $\varsigma$  appears to be added to the old genitive.

### *Locative Singular.*

Ind.-Eur. : *ma-i*.

Skr. : *mayi* = *ma* + *i* + *i* = *ma* + *a* + *i*, the stem *ma-* being lengthened by *a*, as in the instrumental. Skr. *mē* which is used for gen. and dat. sing. is properly a loc. ; compare *s'ivē*, loc. of *s'iva*.

Gr. :  $\mu\omicron\iota$ ,  $\epsilon\mu\omicron\iota$  from St.  $\mu\omicron\text{-}$  = I. E. *ma-*.

L. : Bopp considers gen. *mei* to be a loc. = *mei-ř* = *mař-ř* = Skr. *mayi*.

### *Nominative Plural.*

Ind.-Eur. : the stem of this case was probably formed by adding *sma-* to the demonstrative stems *ma-*, *a-*, *va-* ; consequently it may have appeared in the forms *masma-*, *asma-*, *vasma-*. Initial *m* is found in Lith. *mēs*, O. Sl. *mŭ*, Arm. *meġ* ; initial *v* in Skr. *vayam*, Goth. *weis* (E. *we*) ; initial *a* in Vcd. *asmē*. Bopp considers that Skr. *vayam* is for *mayam*, and that *v* represents an original *m*. This is possible, for initial *m* and *v* are sometimes interchanged ; thus we find\* Basque *maguina* from L. *vagina*, Sp. *mimbre* from L. *vimen*, Sp. *milano* from L. *villus*. In Pāli we find *mayam* (we) from Skr. *vayam*. In all these cases, however, *v* is older than *m*, so that it is just as likely that *m* is derived from *v*, as *v* from *m* (consult §. 95, p. 187).

Skr. : *vayam* = *va* + *i* + *am* = *va* + *a* + *am* ; Ved. *asmē* ; Pāli *mayam*, *amhē*.

\* Diez, "Grammatik der Romanischen Sprachen," vol. I., pp. 250, 357.

Gr.: ἡμεῖς from St. ἡμι- (not from ἡμο- = Ved. *asma-*, for then the nom. pl. would be ἡμοί), Æol. ἄμμες, Dor. ἀμέες, Ion. ἡμέεες (-εῖς = Ion. -έες = -εγεες).

L.: *nōs*; *nōs* is, perhaps, an old accusative used as a nom., and follows the analogy of *equōs* from *equo-*. Bopp, however, considers that the final *s* here belongs to the stem, as it occurs in *nos-ter*, and accordingly he connects it with *-sma*, from which he also derives *-me-t* in *egomet*, *memet*, *tumet*, *uosmet*, and *-mmo* in *immo*\* = *ismo* from St. *i-*. The final *s* of Skr. *nās* is also considered by Bopp to belong to the stem, as it is used for the acc. dat. and gen. pl., and is explained in the same way. In Z. *nāo* = *nās* we find the vowel lengthened, as in L. *nōs*. *Nōs* may be connected with the pronominal root *na-*, as has been already suggested in §. 95, or it may be derived from *ma-*, as initial *m* and *n* are sometimes interchanged: thus we find It. *nespolo* from L. *mespilum*, *nicchio* from L. *mitulus*; Sp. *nespera* and *nispola* from L. *mespilum*, *marfil* from Arab. *nab-fil*, *mueso* from L. *noster*, *mastuerzo* from L. *nasturtium*, *naguela* from L. *majalia*, O. Sp. *nembrar* from L. *memorare*; Fr. *nappe* from L. *mappa*, *natte* from L. *matta*, *nèfle* from L. *mespilum*; Wall. *nalbe* from L. *malva*.†

### Accusative Plural.

Ind.-Eur.: *asma-ns* and *ma-ns*.

Skr.: *asmān* = *asma-ns* and *nās* = *ma-ns*. Schleicher considers that *nas* is for *ma-sma-ns*, initial *m* becoming *n* through dissimilation on account of following *m*.

Gr.: ἡμᾶς, Ion. ἡμέας from St. ἡμι-; Æol. ἄμμε, Dor.

\* I prefer to connect *immo* with the superlative stem *imo-* for *immo-in-mo-*.

† Diez, "Grammatik der Romanischen Sprachen," vol. I., pp. 199, 357.

ἀμέ, either following the analogy of acc. sing. μέ, or being the mere stem for ἀμμι-, ἀμι-.

L. : *nōs*.

*Instrumental Plural.*

Ind.-Eur. : *asma-bhis*.

Skr. : *asmā-bhis*.

*Dative Plural.*

Ind.-Eur. : *asma-bhyams*.

Skr. : *asma-bhyam*, *nas*, Ved. *asma-bhya*.

Gr. : ἡμῖν, Æol. ἄμμιν, ἄμμι; Dor. ἀμίν; (-ιν = -ι-φιν).

L. : *nō-bis* perhaps for *nos-bis*, *nos* appearing as the stem, as in *nos-ter*.

*Ablative Plural.*

Ind.-Eur. : ———?

Skr. : *asma-t*, following analogy of abl. sing.

L. : *nō-bis*.

*Genitive Plural.*

Ind.-Eur. : ———?

Skr. : *asmākam*, properly an adjective in acc. sing. neuter; Ved. *asmāka*, with loss of final *m*; *nas*.

Gr. : ἡμῶν, Ion. ἡμέων, Ep. ἡμείων from St. ἡμι-, Æol. ἄμμεών, Bæot. ἀμίων, Dor. ἀμῶν, ἀμέων.

L. : *nostrum*, gen. pl. of possessive stem *nostro-*, for *nostro-rum*, which occurs in Plautus; *nostri*, gen. sing. of the same stem. Some writers consider *nostrum* to be an acc. sing. neuter.

*Locative Plural.*

Ind.-Eur. : *asma-sva*.

Skr. : *asmā-su*.

Gr. : Æol. ἄμμε-σιν.

*Nominative and Accusative Dual.*

Ind.-Eur. : ——— ?

Skr. : *āvām* from St. *āva-* = *ā* + *tva-* (*I + thou*), according to Bopp, or = *ā* + *dva-* (*I + numeral two*) according to Schleicher, as in Old Lith. *vedu* (m.), *vedvi* (f.); New Lith. *mėdu* (m.), *mėdvi* (f.); and Goth. *vi-t* (*we two*). We also find as acc. *nāu*, for *nās* according to Bopp, a lengthened form of pl. *nās*. *Nāu* is also used for gen. and dat., and therefore *-āu* belongs probably to the stem; it corresponds to Gr. *νώ* in which *ω* also appears to belong to the stem (c. f. Skr. *ashtāu* = Gr. *ὀκτώ*). In form *nāu* is a regular acc. dual of St. *na-*, as *s'ivāu* from *s'iva-*.

Gr. : *νωῖ, νώ*; Boeot. *νωε*.*Instrumental and Ablative Dual.*

Ind.-Eur. : ——— ?

Skr. : *āvābhyām*.*Dative Dual.*

Ind.-Eur. : ——— ?

Skr. : *āvābhyām, nāu*.Gr. : *νωῖν, νῶν*.*Genitive Dual.*

Ind.-Eur. : ——— ?

Skr. : *āvayós, nāu*.Gr. : *νωῖν, νῶν*.*Locative Dual.*

Ind.-Eur. : ——— ?

Skr. : *āvayós*.

## §. 164. THE PRONOUN OF THE SECOND PERSON.

*Nominative Singular.*

Ind.-Eur. : *tvam* for *ta*\* + *va* + *ma* (see §. 95, p. 187)

Skr. : *tvam*.

Gr. : σὺ, Dor. τὺ, Bæot. τοῦν (= Z. *túm*), τοῦ, τύνη, Lacon. τύνη.

L. : *tu*.

*Accusative Singular.*

Ind.-Eur. : *tva-m*.

Skr. : *tvám*, *tvá*, which Bopp explains in the same way as *mám*, *má*.

Gr. : σέ, Dor. τέ, τὺ, τέι; Cret. τρέ, Bæot. τίν.

L. : *tē* for *trem*, from St. *tvi*-; O. L. *ted* (an ablative form used as an accusative by Plautus), U. *tiom* for *tuom* = *tvam*; or, according to Corssen, for *tvio-m* from St. *tvi*- lengthened by *a*.

\* Lottner (in his essay quoted in p. 315) remarks, that "whatever the actual nature of the *Thou* may be, it cannot be overlooked, that in a mere abstract metaphysical point of view it is but one of the many cases of the non-ego, and that therefore it is not altogether unreasonable to expect that language should treat it as such; in other words, that the pronoun of the second person should somehow be a variety—strongly marked indeed by individual characteristics—of the pronoun of the third person."

Thus in the Indo-Eur. languages *ta* is the stem of Skr. *ta-m* (cum), Gr. *ρόν*, L. (*is*-) *tum*, Sl. *tŭ*, Goth. *thana*, O. H. G. *den*, &c.

Also in the Semitic languages the stem of the second person is either *tha* or *ta*, to which the syllable *an* or *en* is prefixed, and this same *tha* or *ta* with the same prefix *an* or *en* is also used as the stem of the pronoun of the third person. Thus we have Egyptian *ento-k* (thou, m.), Coptic *entho-k* (thou, m.), &c., beside Egyptian *ento-f* (he), Coptic *entho-f*, &c.

Those writers who derive the pronouns from verbal roots connect *tvam* with I. E. *tan* (to stretch).

*Instrumental Singular.*

Ind.-Eur. : ——— ?

Skr. : *tvayâ* = *tva* + *i* + *â* = *tva* + *a* + *î*.*Dative Singular.*Ind.-Eur. : *tva-bhyam*.Skr. : *tu-bhyam*, Ved. *tu-bhya*.Gr. : Hom. *τῇν*, Dor. *τίν*, Tarent. *τίνη*.L. : *tibi* (final *m* being lost, as in Ved. *tubhya*) ; U. *tefe*.*Ablative Singular.*Ind.-Eur. : *tva-d* or *tva-t*.Skr. : *tva-t*.L. : *tē*, O. L. *tēd* from St. *ti*.*Genitive Singular.*

Ind.-Eur. : ——— ?

Skr. : *tava* for *tvatva*, a reduplication of stem, with loss of case ending.Gr. : *σοῦ*, Ion. *σέο*, *σεῦ* ; Ep. *σεῖο*, *τεοῖο* (= *tava-sya*) , Dor. *τέο*, *τεοῦ*, *τεῦ*, *τίω*. In Dor. *τέος*, *τεοῦς*, *τεῦς*, *σλος*, *τίως*, the gen. case-ending *ς* appears to be added to the old genitive.L. : *tui*, the gen. sing of the possessive stem *tuo*-.*Locative singular.*Ind.-Eur. : *tva-i*.Skr. : *tvayi* = *tva* + *i* + *i* = *tva* + *a* + *i*. Skr. *tē*, Ved. *tvé*, which is used for dat. and gen. sing. is properly a locative.Gr. : *σο-ί*, Dor. *το-ί*.*Nominative Plural.*Ind.-Eur. : *tvasma*- was probably the stem.Skr. : *yáyam* for *tva* + *i* + *am* = *tva* + *a* + *am* ; Ved. *yushmē* ; Pāli *tumhē* (= *tus-mē*).

Gr. : ὑμεῖς from St. ὑμι-, Æol. ὕμμες, Dor. ὑμές, Bæot. οὐμές, Ion. ὑμέες.

L. : vōs (compare nōs).

*Accusative Plural.*

Ind.-Eur. : *tvasmā-ns* or *tvā-ns*.

Skr. : *yushmān* = *tvasmāns*, Ved. *yushmās* (f.); *vas* = *tvāns*.

Gr. : ὑμᾶς, Ion. ὑμέας from St. ὑμι-; Æol. ὕμμε, Dor. ὑμέ (compare ἄμμε, &c.).

*Instrumental Plural.*

Ind.-Eur. : *tvasma-bhis*.

Skr. : *yushmā-bhis*.

*Dative Plural.*

Ind.-Eur. : *tvasma-bhyams*.

Skr. : *yushma-bhyam*, *vas*.

Gr. : ὑμῖν = ὑμι-φιν, Æol. ὕμμι, ὕμμιν; Bæot. οὐμῖν.

L. : *vō-bis* (compare *nō-bis*).

*Ablative Plural.*

Ind.-Eur. : ——— ?

Skr. : *yushma-t* (compare *asma-t*).

L. : *nō-bis*.

*Genitive Plural.*

Ind.-Eur. : ——— ?

Skr. : *yushmākṣm*, Ved. *yushmāka*; *vas*.

Gr. : ὑμῶν, Ion. ὑμέων, Ep. ὑμέων from St. ὑμι-; Æol. ὕμμέων, Bæot. οὐμίλων.

L. : *vostorum*, *rostrum* (*ves-*), *rostri* (*ves-*).

*Locative Plural.*

Ind.-Eur. : *tvasma-sva*.

Skr. : *yushmā-su*.

Gr. : Æol. ὕμμεσιν probably, after analogy of ἄμμεσιν

*Nominative and Accusative Dual.*

Ind.-Eur. : ——— ?

Skr. : *yuvām* from St. *yuva-* = *tva* + *tva-* (thou + thou), or *tva* + *dva* (thou + numeral two), compare Lith. *yù-du* (m.), *yù-dri* (f.); Ved. *yuvām*. We also find as acc. *vām* for *vāv* (according to Bopp) = *vāu* = *vās*, (compare *nāu*).

Gr. : *σφῶϊ, σφῶ.\***Instrumental and Ablative Plural.*

Ind.-Eur. : ——— ?

Skr. : *yuvā-bhyām*. In Vedic we also find *yuvat* as abl. ; compare *mat*, &c.

*Dative Dual.*

Ind.-Eur. : ——— ?

Skr. : *yuvā-bhyām, vām* ; Ved. *yuva-bhyām*.Gr. : *σφῶϊν, σφῶν.**Genitive Dual.*

Ind.-Eur. : ——— ?

Skr. : *yuva-yós, Ved. yuvós, vām*.Gr. : *σφῶϊν, σφῶν.**Locative Dual.*

Ind.-Eur. : ——— ?

Skr. : *yuva-yós*.

## §. 165. THE REFLEXIVE PRONOUN.

There is no distinction of gender in this pronoun, except in Gr. nom. and acc. pl. *σφέα*. The Ind.-Eur. stem was *sva-*, which in Sanskrit only occurs in compounds, as in *sva-yam* (self) = *sva* + *i* + *am* = *sva* + *a* + *am*, *sva-tas* (by one's self),

\* Σφ in these forms implies an original *sv*, which may represent an I. E. *tv*.

*sva-dhā* (spontaneity), *sva-bhū* (self-existent), &c. In Sanskrit the stem *sva-* is also used as a possessive; Skr. *sva-s* = Gr. *σφό-ς*, L. *suus*. This stem is found in Gr. *ἴδιος* = *σφε-διος*, *ἔτης* = *σφε-της*, *ἔθος* and *ἥθος* = *σφε-θος* (compare Skr. *svadhā*); Hom. *φή* = *σφη* (initial *σ* being lost, as in Lac. *φίν* = *σφίν*, Lac. *κουτάλα* = *σκυτάλη*, Lac. *κυρσάνιον* = *σκυρθάνιον*, Lac. *φαιρίδ-διν* = *σφαιρίζειν*, Bæot. *Φίξ* = *Σφίγξ*; L. *funda* beside Gr. *τφενδύνη*, L. *fīdes* beside Gr. *σφίδες*, L. *fallo* = Gr. *σφάλλω*, L. *figo* = Gr. *σφίγγω*, whence *φίμος* = *σφιγ-μος*); and in L. *si*, *si-qua* = U. *sve-pu*, *si-ne* (?), *sed* (an ablative form), *sē-voco*, *sed-itio*, *sē-orsum*, *sue-sco*, *sū-dālis* (from *sodā* = Skr. *sva-dhā*). Bopp connects *-pse* in *ipse* with *sva-*, *v* becoming *p* when transposed, as in Dor. *φίν* = *σφίν*; but this is wrong, for *ipse* = *i-pte* (compare *sua-pte*), and *-pte* is, probably, connected with Skr. *vati-* (master) = Gr. *ποσι-*, L. *pot-is*, Lith. *pati-s* (self).

### *Nominative Singular.*

This case is not found in Greek and Latin.

### *Accusative Singular.*

Ind.-Eur. : *svā-m*.

Gr. : *ξ*, Æol. *φέ* = *σφε*, Hom. *ἔέ* = *σέφε*, Dor. *σφέ*. Ep. *μίν*, Dor. *νίν*, which are used for *ξ*, are, perhaps, for *ιμ-ιμ*,\* a reduplicated accusative of St. *ι*; compare the Latin reduplicated accusatives *sese*, O. L. *em-em* (*eun-dem*).

L. : *sē* = *sve* = *svi-m* from St. *svi*, O. L. *sed* (*inter sed* in SC de Bac., *apud sed* in tab. Bant.); Osc. *siom*† for *suom* = *sva-m*. Corssen explains *siom* as a lengthened form from St. *si-* by the addition of *a*, and consequently as = *svi-o-m* (compare *e-u-m* = *i-u-m*, Osc. *i-o-n-c* from St. *i-*).

\* Curtius, "Grundzüge der Griechischen Etymologie," p. 477.

† Schleicher, "Compendium," &c., p. 644.

*Dative Singular.*

Ind.-Eur. : *sva-bhyam*.

Gr. : Bæot. *ἑῖν* (Corinna), Dor. *ἑῖν*, contracted from *ἑῖν*  
= *ἑ-φιν*.

L. : *sibi*, U. *sibe*, O. *sifei*, from St. *svi*-.

*Ablative Singular.*

Ind.-Eur. : *sra-d* or *sra-t*.

L. : *sē*, O. L. *sēd* for *seid*, from St. *svi*-.

*Genitive Singular.*

Ind.-Eur. : ——— ?

Gr. : *οὔ*, Ep. *ἔο* = *σφε-σγο*, Ion. *ἔο*, Dor. *εὔ*, *έοὔ*, Bæot. *έοὔς*.

L. : *sui*, the gen. sing. of the possessive stem *suo*-.

*Locative Singular.*

Ind.-Eur. : *sva-i*.

Gr. : *οἷ*, Æol. *φοῖ*, Bæot. *ἑῖ*.

*Nominative Plural.*

Ind.-Eur. : ——— ?

Gr. : *σφεῖς*, *σφέα* (n.), from St. *σφι*-.

*Accusative Plural.*

Ind.-Eur. : ——— ?

Gr. : *σφεῖς*, *σφέα* (n.) ; Ion. *σφέας*, *σφεῖας*, Dor. *σφέ*, Syrac.  
*ψέ*, Æol. *ἄσφε*.

L. : same as in sing.

*Dative Plural*

Ind.-Eur. : *sva-bhyams*.

Gr. : Dor. *σφίν*, Syrac. *ψίν*, Lacon. *φίν*, Æol. *ἄσφι*.

L. : same as in sing.

*Ablative Plural.*

Ind.-Eur. : ——— ?

L. : same as in sing.

*Genitive Plural.*

Ind.-Eur. : ——— ?

Gr. : *σφῶν*, Ion. *σφέων*, Æol. *σφείων*, Syrac. *ψῶν* and *ξων*.

L. : same as in sing.

*Locative Plural.*Ind.-Eur. : *sva-sva*.Gr. : *σφίσι*.*Nominative and Accusative Dual.*

Ind.-Eur. : ——— ?

Gr. : *σφωέ*, *σφώ*.*Dative and Genitive Dual.*

Ind.-Eur. : ——— ?

Gr. : *σφωίν* = *σφω-φιν*.

## §. 166. THE PRONOUNS IN WHICH THE GENDER IS MARKED.

An examination of all the pronouns of this class found in each language belongs to the special grammar of each, and we here limit our investigation to the declension of these pronouns, selecting the I. E. demonstrative stem *ta* as the one of which the declension will be given in full. In the three following sections we merely notice the chief points of difference between the declension of the pronouns and that of the nouns, omitting some exceptions which will be found in the special grammars of each language.

## §. 167. THE SANSKRIT PRONOMINAL DECLENSION.

The nom. sing. masc. generally ends in *-s*, as in the noun, except in *sa* (nom. sing. masc.), where the final *s* was omitted, because it was perhaps a repetition of *sa* itself. The same omission is found in Goth. *sa* and Gr. *ὁ*. We also find the peculiar nominatives *ayam* (m.), *īyam* (f.), which are ana-

logous to the personal pronoun *aham*;\* also the nom. *asáu* (m. f.), which, perhaps, arose from an older *asûs*. The nom. and acc. neut. sing. ends in *d* or *t*, and this form is used as the true stem in compounds. The nom. pl. masc. ends in *-ê*, which, perhaps, arose from *-a-i-as* = *-a-a-as*, the stem being lengthened by *a*, which afterwards became *i*, and the final *as* being lost; thus *tê* = *ta-i-as* = *ta-<sup>a</sup>-as*. In the dat., abl., and loc. sing. the masc. and neut. *a*-stems are lengthened by the addition of *sma*; and in the same cases the fem. *û*-stems are lengthened by *si* (= *smi*, according to Bopp). The gen. pl. ends in *-sûm*.

#### §. 168. THE GREEK PRONOMINAL DECLENSION.

The nom. sing. mas. ends in *-ς*, as in the noun, except in *ô* = Skr. *sa*. The nom. sing. neut. ends in *-ο* = *-or*, final *τ* (or *δ*?) being lost. In other respects the pronominal is the same as the nominal declension.

#### §. 169. THE LATIN PRONOMINAL DECLENSION.

Final *-s* of nom. sing. masc. is sometimes lost, as in *ipsê* (beside *ipsus*), *iste* (beside *istus*), *ecqui*, *siqui*, *qui* (beside *quis*) = O. *pis*, *hic*. *Qui* is probably for *quôî* (whence O. L. *quei*) = U. *poi*, *poei*, *poe*, and *hic* for *hoi-ce*, the stems in both cases being lengthened by *-i*. The nom. sing. fem. ends in *-a* except in *quæ* = O. *paî*, *hæc*, *illæc* (beside *illa*), *istæc* (beside *ista*), the stems of these pronouns being also lengthened by *-i*. *Quis* is used as a nom. fem. in Plautus (*quis mulier est*), as Gr. *τίς*. This *-i* that is added to the stem in *quæ* is of common occurrence, as in U. *pir-i*, *pir-e* = L. *quid* + *i*, &c.; Gr. *οὔρος-ι*, &c.: Bœckh con-

\* The neuter termination *-m*, which is used as masculine and feminine in *ajam* (m.), *iyam* (f.), and *aham*, dates from a time when the distinction of gender had not yet been developed.

siders that it is also found in the forms *τοί* (= *τό*), *ταί* (= *τά*), which occur in the "Fœdus Elcorum et Heraeensium," but Ahrens ("de Græcæ Linguæ Dialectis," I., p. 280) opposes this view, and considers *τοι* and *ται* to be for *τῶ* and *τᾷ*. The fem. sometimes occurs without this addition, as in *aliqua*, *numqua*, *siqua* = U. *svepu*. The nom. and acc. sing. neut. are formed by adding *d* to the stem, as in *id* = O. *íd*, *quod* = O. *púd*, *quid* = O. *píd*, O. L. *alid* = *aliud*, U. *pir* (-i) = *quid*, &c. In the second century B.C. this *d* had a very weak sound, and was sometimes almost imperceptible, just as in Gr. *τί* and *ἄλλο* the suffix vanishes. Beside *aliud* we find *aliūm* (Fabr. 95, 211), as in Gr. *ροσοῦτρον* beside *ροσοῦτρο*. *Ipsūm* is neut. of *ipse*. *Hoc*, O. L. *hoce* is for *hod-ce*. The nom.s pl. masc. and fem. are formed in the same way as in the noun: as in the masc. forms *eeis*, *ieis*, *eis*, *ei*, *ques*, *quei*, *qui*, *heis*, *hisce*, *hei*, *hi*, and the fem. *quæ*, *istæ*, &c. The O. *paş* (= L. *quæ*) is analogous to Skr. nom. pl. fem. The nom. and acc. pl. neut. is the same as in the noun, except in *hæc*, O. L. *haice*, *quæ* = O *paí*, *istæc* (beside *ista*, *illæc* (beside *illa*), where the stems are lengthened by *i*. This *i* is not found in *aliqua* and *siqua*.

\* The dat.s sing. (m. f. n.) *illi*, *ipsi*, *toti*, *alteri* = O. L. *alterei* for *altero-i*, &c., are, probably, old locatives: such as *humi* and *domi*. In the O. L. *quoiei* we find the stem lengthened by *i* and then the true dative suffix *-ei* = I. E. *-ai* was added. It is possible that *isti*, &c., may have been formed as *quoiei*, and accordingly that they may have arisen from the true dative forms *istoiei*, &c. We also find the dat. sing. masc. ending in *-o*, as in *nullo usui*, in Cæsar, &c., and the fem. ending in *-æ* in Plautus, &c. In the Umbrian datives *e-smei*, *pu-sme*, we find the stem lengthened by *-sma*, as in Sanskrit.

The gen.s sing. *istius*, &c., were formed by adding *-ius* to the stem lengthened by *i*: *istius* would then be for *isto-i-ius*. The ending *-ius* is supposed by Bopp to have arisen merely by transposition from the gen. ending *-sya*, but it is much

more probable that *isto-i-ius* is for *isto-i-siu-s*, *-siu* being = *-sya*, and *-s* being added, as in the Doric gen. sing. of the first and second personal pronouns, ἐμέος, ἐμοῦς, τέος, τεοῦς. Meunier considers *istius*, &c., to have arisen from *isti-ius*, &c., *isti* being the usual genitive in *-i* and *-us*, an enclitic genitive of the pronominal stem *-i*.\*

The adverbs *hic* = O. L. *heic* and *qui* are old locatives, and = *hoi-c* and *quoi*. Similarly in Oscan we find loc. *evei-c* from pronominal stem *evo-*. Corssen considers *qui* to be an ablative form for *quei-d*; *quicum* is used for both *quocum* and *quacum*.

Beside *quorum*, gen. pl. of stem *quo-*, we find *cuium* as gen. pl. of stem *qui* (Charisius II., 136).

#### §. 170. THE DECLENSION OF THE STEM *ta-* (m. n.)

|          | Skr.                                   | Gr.                              | L.                                     |
|----------|--|----------------------------------|--|
| Stem.    | <i>ta-</i>                             | <i>το-</i>                       | <i>is-to-</i> †                        |
| Sing. N. | <i>sa, sa-s</i> (m.), <i>ta-t</i> (n.) | <i>ὁ</i> (m.), <i>τό</i> (n.)    | <i>iste</i> (m.), <i>isti-d</i> (n.)   |
| A.       | <i>ta-m</i> (m.), <i>ta-t</i> (n.)     | <i>τό-ν</i> (m.), <i>τό</i> (n.) | <i>istū-m</i> (m.), <i>istū-d</i> (n.) |
| I.       | <i>ti-n-a</i>                          | ---                              | —                                      |

\* Consult Meunier's Essay "De quelques anomalies que présente la déclinaison de certains Pronoms Latins" ("Mémoires de la Société de Linguistique de Paris." Tome I., pp. 14-62). Beside these genitives in *-ius* we also find in Old Latin the gens *ei, quoi, cui, qui*, &c. as in *Ei rei argumenta dicam* (Pl. Trin. 522) *Quoi fides fidelitasque amicum erga æquiperet tuam* (Pl. Trin. 1126), *Perii quot hic ipse annos vivet, cui filii tam diu vident* (Pl. Mil. 1081), &c. In Plautus Pers. 83, Meunier reads *Set eccum parasitum quoi mi ius auxiliost opus*, and considers that here we find existing separately the two genitives (*quoi* from stem *quo-*, and *ius* from stem *i-*), which afterwards coalesced into *quidius*.

The dative *quoiei* (which occurs on the fourth inscription on the tomb of the Scipios, *Quiei vita defecit, non honos, honoreis*), is, according to Meunier, a double locative from *quoi* loc. of *quo-*, and *ei* loc. of *i-*. Similarly the *Lat. eiei* (as in Lucr. III., 555, *Sive aliud quidvis potius connexius eiei*) is a double loc. of *i-*.

† L. *is-to-* is compounded of the three stems *i-*, *sa-* and *ta-*. In addition to the declension of *isto-* I also give some other pronominal forms to illustrate the original declension of the pronouns.

|             | Skr.                          | Gr.                             | L.                         |
|-------------|-------------------------------|---------------------------------|----------------------------|
| D.          | <i>tā-smāi.</i>               | <i>τῷ.</i>                      | <i>istī, U. pu-sme.</i>    |
| Ab.         | <i>tā-smā.†.</i>              | <i>τῷς = τω-τ.</i>              | <i>istā-d.</i>             |
| G.          | <i>tā-sya.</i>                | <i>το-ῖο, τοῦ.</i>              | <i>istūs.</i>              |
| L.          | <i>tā-sm-in.</i>              | —                               | —                          |
| Plur. N.    | <i>tē (m.), tā-n-i (n.)</i>   | <i>τοί, οἱ (m.), τὰ (n.)</i>    | <i>istī, U. pur-e (m.)</i> |
| —           | •                             | —                               | <i>istā, qua-e (n.)</i>    |
| A.          | <i>tā-n (m.), tā-n-i (n.)</i> | <i>τόνς, τοῦς (m.), τὰ (n.)</i> | <i>istō-s (m.), istā</i>   |
| J.          | <i>tāis.</i>                  | —                               | —                          |
| D. Ab.      | <i>tē-bhyas.</i>              | —                               | <i>istīs.</i>              |
| Plur. G.    | <i>tē-sham.</i>               | <i>τῶν.</i>                     | <i>istō-rum.</i>           |
| L.          | <i>tē-shu.</i>                | <i>τοῖ-σι, τοῖς.</i>            | —                          |
| Dual. N. A. | <i>tāu, tā (m.), tē (n.)</i>  | <i>τῷ.</i>                      | —                          |
| I. D. Ab.   | <i>tā-bhyām.</i>              | <i>το-ῖν.</i>                   | —                          |
| G. L.       | <i>tā-y-ōs.</i>               | —                               | —                          |

§. 171. THE DECLENSION OF THE STEM *tā-* (f.).

|             | Skr.             | Gr.                   | L.                    |
|-------------|------------------|-----------------------|-----------------------|
| Stem.       | <i>tā.</i>       | <i>τα-</i>            | <i>is-tā-</i>         |
| Sing. N.    | <i>sā.</i>       | <i>ἡ.</i>             | <i>istā, qua-e.</i>   |
| A.          | <i>tā-m.</i>     | <i>τᾶ-ν, τῇ-ν.</i>    | <i>istā-m.</i>        |
| I.          | <i>tā-y-ā.</i>   | <i>ῇ-φι.</i>          | —                     |
| D.          | <i>tā-sy-āi</i>  | <i>τῇ.</i>            | <i>istī.</i>          |
| Ab.         | <i>tā-sy-ās.</i> | —                     | <i>istā-d.</i>        |
| G.          | <i>tā-sy-ās.</i> | <i>τῇ-ς.</i>          | <i>istūs.</i>         |
| L.          | <i>tā-sy-ām.</i> | —                     | —                     |
| Plur. N.    | <i>tā-s.</i>     | <i>ταί, αἱ.</i>       | <i>istā, O. pa-s.</i> |
| A.          | <i>tā-s.</i>     | <i>(τᾶ-νς), τᾶ-ς.</i> | <i>istā-s.</i>        |
| I.          | <i>tā-bhis.</i>  | —                     | —                     |
| D. Ab.      | <i>tā-bhyas.</i> | —                     | <i>istīs.</i>         |
| G.          | <i>tā-sām.</i>   | <i>τᾶ-ων, τῶν.</i>    | <i>istā-rum.</i>      |
| L.          | <i>tā-su.</i>    | <i>τῇ-σι, ταῖς.</i>   | —                     |
| Dual. N. A. | <i>tē.</i>       | <i>τᾶ.</i>            | —                     |
| I. D. Ab.   | <i>tā-bhyām.</i> | <i>τα-ῖν.</i>         | —                     |
| G. L.       | <i>tā-y-ōs.</i>  | —                     | —                     |



# APPENDIX.

## THE SANSKRIT CEREBRALS OR LINGUALS.

DR. GEORGE BÜHLER, in his essay "On the Origin of the Sanskrit Linguals," has attempted to demonstrate that these sounds were not borrowed from the Dravidian races of India, but that they were for the most part developed within the limits of the Sanskrit. As Bühler's essay is very instructive, I have condensed his chief arguments in this Appendix, and frequently employed his own words.\*

The borrowing of sounds by one language from another is a phenomenon that has never been proved to have occurred in languages that have been influenced by others in historical times. Thus, take the case of English; though it was under Norman influence for so many centuries, and though traces of that influence are seen on all sides in borrowed words, loss of the old Saxon inflexions, &c., yet not a single Norman sound was introduced into it. Neither the French *a* nor *u* nor *nasals* were adopted by the English; and it is just as difficult for an Englishman of the nineteenth century to pronounce these sounds as it was for a Saxon of the tenth century.. But the case of such nations as the Irish, the Germanised Slavonians, &c., demonstrate the same fact still more manifestly; for, while these nations have almost completely lost their original language, and adopted that of their conquerors, they still retain their native sounds, and have adapted their new language to them.†

\* Bühler of course is not responsible for *all* the examples and comparisons adduced here.

† Thus the initial sound heard in the Irish pronunciation of E. *car* is not *ky*, as is commonly supposed, but the hard aspirate *kh*, which, with the other hard aspirates, is still found in Irish.

Moreover, before we can assert that the Skr. cerebrals are borrowed from the Dravidian languages, we must prove that the conditions under which alone sounds can be borrowed, existed in the case of Skr.; i. e. we must prove that a great many foreign words containing the sound in question were first borrowed and that thus the new sound became perfectly familiar to the people. Therefore it has first to be demonstrated that Sanskrit in very early times already possessed, as loans, a number of Dravidian words containing these cerebrals. Dr. Caldwell, who strongly supports the theory of the Dravidian origin of these sounds, enumerates only sixteen nouns containing cerebrals which he supposed to have been borrowed. Only two of these, *āni* (the pin of the axle of a car), and *kaṭuka* (sharp), are found in the Rīgveda, and even these can be easily deduced from ordinary Sanskrit roots. *Āni* is for *arni*, from R. *ar* (to fit); and consequently may mean "a thing to be fitted (into some other thing)", compare *ara* (a spoke); *kaṭu* (sharp) is for *kartu* from *kṛt* (to cut). Even supposing that these sixteen words were borrowed, they would be far too few in number to cause the introduction into Sanskrit of the cerebral sounds which they contain.

As Zend, however, contains three cerebrals, the consonantal and vocalized *r* and *sh*, and as it can be shown that nearly all the Skr. cerebral mutes and nasal are produced by the direct change of *r* and *sh* into them, or by the change of dentals into the corresponding cerebrals through the influence of *r*, *r* and *sh*, we must surely infer that cerebralization is not due to the influence of foreign tongues, but solely due to the genius of the language itself. As proof of this, we have the following facts:—

A dental *n* is frequently changed into *ṇ*, when it is immediately succeeded by a vowel or *y* or *v*, under the influence of a preceding *r*, *ṛ*, *r* or *sh*, provided no palatal, cerebral, dental, sibilant, or *l* intervene; thus *k'ikīrsha* with suffix *māna* forms *k'ikīrshamāṇa*, *bhrah-māṇan* comes from *bhrahman*, &c.\* *Anaḍvah* (an ox) is for *anarrah*, from *anas* (a cart), and *vah* (to draw); the change of *-as* into *ar* be-

\* Consult Bopp's "Kritische Grammatik der Sanskrita-Sprache," pp. 60, 61.

fore a soft consonant is found in the Vedas as *usharbudh* (early awake) for later *ushóbudh*, *vanargu* (a thief) for *vanógu*. *R*, when followed by *n*, is assimilated to it sometimes in Sanskrit and always in Prakrit. In Sanskrit the first of these *n*'s may be dropped, and the preceding vowel lengthened, as *dāṇāś'a* (imperishable) for and beside *durnāś'a*, *dūṇas'a* (difficult to obtain) for and beside *durnas'a*. *Pāni* (the hand) = *parṇi* from *pr* (to fill). *Anu* (small) = *arṇu* from I. E. *ar* (to hurt, grind), whence Skr. *arus* 'n. a wound', and Gr. ἀλέω (I grind), *ἄλευρον*\* (flour); *anu* would accordingly mean literally "ground down." *Paṇ* (to buy) is for *parṇ* from *pr* (to fill) beside Gr. *πίρνημι*, *πόρνη* (cf. Skr. *paṇya-strī*), *πρίαμαι*, &c.; the obscure *banig'* or *vanig'* (a merchant) may be connected with this root. Bühler illustrates this change of *p* into *b* or *v* by *pibāmi* or *pivāmi* (I drink) for *pā* and *sphāvaya* for *sphāpaya*, the causal of *sphāy* (to swell). We also find *vishtapa* (a world) for and beside *pishtapa*, *vāṇa* and *bāṇa* (an arrow) beside *parṇa* (a leaf, a feather).

In Prākṛit, Pāli, and the modern vernaculars, mute dentals have become cerebrals through the influence of *r*. Thus Skr. *tālavṛnta* (a leaf of a palm tree, a fan), *vṛddha* (old), *kṛta* (made), *bhartā* (nom. sing. a husband), *gardabha-s* (nom. sing. an ass), &c., become respectively *talavṛnta*, *vudḍha*, *kata*, or *kita*, *bhattā*, *gaddaho*, &c. This influence of *r* shows itself even in Vedic as in *dūdḍhi* for *durdhi*, *kuta* for *kṛta*, &c. In Classical Sanskrit we find many similar examples, as *nātaka* (a dancer) for and beside *nartaka*; *bhāṭa* (a soldier), derived by Benfey from *bhar*, and therefore being for *bharta*; *bhātaka* (wages) for *bhartaka*; *vāṭa* (a circle, rope) for *varta* from *vṛt* (to turn), cf. L. *verto*; *patta* (a table, seat), from *patra*, according to Benfey; *paṭu* (skilful) from *pat* (to divide), for *part*, cf. L.

\* Curtius deduces these Greek words from a R. *Fελ* or *Fαλ* = I. E. *val* or *var*, whence Skr. *ūrmi-s* (a wave), Gr. ἐλύνω (I roll), οὐλαί (unground barley), ὄλμος (a mortar, a round stone), ἀλοάω (I thresh), ἀλωή, Att. ἔλωε (a threshing floor), μάλευρον (= ἄλευρον, Hesych.) from *Fαλευρον*, &c., L. *volvo*, Goth. *valvjan* (to roll). The final sound in Gr. ἐλν-, L. *volvo*-, Goth. *valv-* is a shortened form of reduplication; the *F* is represented by *o* in *όλοοίτροχος* (a rolling stone) = *όλφοίτροχος*, and in *ἀλοάω* = *ἀλFαω*. We find similar cases of short reduplicated forms in Greek, as *φó-β-o-ς*, *φi-β-o-μαι* beside Skr. *bhi* (timere), *φέρ-β-ω*, beside *φέρ-ω*, Skr. *bhar*, *πόρ-π-η* beside *περ-άω*, L. *por-ta*, &c.

*par(t)-s* ; *vaṭa* (an enclosure) for *varta*, from *vr* (to enclose), cf. L. *vallum*; *kantaka* (a thorn) for *karntaka*, according to Benfey, from *krt* (to cut); *taṭa* (horizon, bank of a river, mountain) for *tarta* from *tr* (to cross), as *pāra*\* (ripa opposita) comes from *par* (to cross), cf. Gr. *πόρος*, *περαίνω*, *πέραν*, L. *per*; *taḍ* (to strike) for *tard*, with which Bopp connects Goth. *(us-)thrut* (molestiam facere); *tadit* (fulmen), *tandula* (granum frumenti, præcipue oryzæ) from *tad*; *paṭh* (to recite) from *prāth* (to celebrate), cf. L. *inter-pretari*; Benfey, however, considers it to be a demonstrative derived from *paṣṭa* for *spasṭa* (evident); *purōḍās'a* (a cake made of rice meal, offered to the gods) from *dās* (to make oblations). In these two last examples the dental is influenced by *r*, although *i* vowel intervenes. Bühler considers that a dental has become a cerebral in the following cases through the influence of a succeeding *r*; *k'anda* (flaming, passionate) for *k'andraṭ* (the moon, glowing); *daṇḍa* (a stick) for *dantra* from *dam* (to coerce, tame), and *tra* (a suffix signifying the instrument); *mēṭha* (an elephant-driver) beside *mahāmātra* (id.).

*Sh*, when it is original or a substitute for *k'h*, *g'*, *s'*, *ks*, becomes *t*, whenever it ends a word or precedes either the termination (-*su*) of the loc. pl. or hard consonants except *t*, *th*, and *s*: while before a soft consonant it becomes *ḍ*, and if *ḍ* or *dh* immediately follow, then these become *ḍ* or *dh* respectively.† Thus we have from the stems *dvish* (hating), *rāj'* (a king), *vis'* (entering), *viviksh* (desirous to enter) = *viviks*, *prāk'h* (asking), *nis'* (night), as nom. sing. *dvit*, *rāt*, *vit*, *vivit*, *prāt*, *nīt*; as instr. pl. *dvidbhis*, *rādbhis*, *vidbhis*, *vividbhis*, *prādbhis*, *nīdbhis*; and as loc. pl. *dvitsu*, *rātsu*, *vitsu*, *vivitsu*, *prātsu*, *nitsu*. We have also such verbal forms as *dviddhi* (2 sing. imper. Par.) from *dvish* (to hate), *didḍhram* (ye ruled) from *iś* (to rule), &c. We find one of the soft cerebrals formed in accordance with this rule sometimes rejected, and then a preceding *a*

\* Bopp ("Gloss. Comp. Ling. Sanskr.," p. 238) suggests that *pāra* may come from *para* (alius).

† Bopp connects *k'anda* with Goth. *hata* (I hate).

‡ There are some exceptions to this law; from St. *mṛśh* (enduring) we have *mṛk* (nom. sing.) *mṛgbhis* (instr. pl.), &c.

becomes *o*, and *i* or *u* becomes *i* or *û*. Thus *shôdas'an* (sixteen) = *shash* (six) + *das'an* (ten), *shôdha* (sixfold) = *shash* + *dha*, *shôdant* (a young ox with six teeth) = *shash* + *dant*. *Nidha* (a nest) = *nishda* = *ni* + *sada* (what lies under); *pid* (to press) = *pishd* = *api* + *sad* (to sit upon). Again, *n* becomes *ṇ* when preceded by *sh* under the same conditions as when preceded by *r*, *r̥* or *ṛ̥*, as has already been remarked. Lastly, when *sh* immediately precedes a hard dental, it changes it into the corresponding cerebral, as *dvēshtum* (to hate, infin.), *dvēshti* (he hates), *dvishtha* (ye hate), *dvishṭa* (hated), *ushttha* (ye desire) from *vas'*, *ashtāu* (eight) for *as'tāu* from an original *aktāu* = L. *octo*, *shashtha* (sixth), *shashṭa* (sixtieth), &c. In a few cases *s* after *a* becomes *sh*, and then changes a following *t* or *th* into *ṭ* or *ṭh*, thus from *ava* and *stambh* (to prop) we get *avashtambha* (relying on), *avashtabhnati* (he supports himself), *ashtādha* (the old name of a month, partly June and partly July, or a staff carried in that month by an ascetic), *g'athara* (the belly) for *gastara* beside Gr. γαστήρ.

*II* can also become a cerebral and change a neighbouring dental into a cerebral: thus we have from St. *lih* (licking) we have *liṭ* (nom. sing.), *liḍbhis* (instr. pl.), *liṭsu* (loc. pl.): from *lih* (to lick) we have *lēdhi* (he licks), *liḍha* (licked), *liḍhvē* (ye licked); from *ruḥ* (to grow) we have *rôdhum* (to grow, infin.) *rûdha* (grown), &c.

Cerebrals also arise from the assimilative force of neighbouring cerebrals, thus from *iḍ\** (to praise) we have *ittē* (he praises) from *iḍ* + *tē*, *āiddhvam* (ye praised) from *āiḍ* + *dhvam*; *ganṭi* (calculation) from *gaṇ* (to number) + *ti*, *gaṇ* is a denominative derived probably from *gana* (a multitude) connected with Lith. *gand* (satis), *ganau* (pasco greges), according to Bopp, but it is better to treat *gana* as for *garna* from I. E. *gar* (to collect) when ἀργείρω; *phāṇṭa* (easily

\* According to Benfey, *iḍ* is a denominative verb based on *ish* (to wish, chose), and accordingly it is for *ishṭ* = *is* + *t*; compare Gr. ἰσθς, ἱμερος (?) from same root. In the Vedas we find *il* for *iḍ*, as in *tvām . . . martāsa ilatē* (te homines celebrant); consult Bopp's "Skr. Gloss.," p. 48. It is possible that *il* is the original form, and that *iḍ* is derived from it, as we frequently find *d* representing *l* in the Romance languages, as in Sardinian *pedde* from L. *pollis*, *poddhige* from L. *pollex*, *casteddu* from L. *castellum*, and Sicilian *cavaddu* from L. *caballus*, *beddu* from *bellus*, &c.

prepared) from *phan* (to produce easily) + *ta*; *tad dayanam* (this flight) for *tat d.*, *tān dīndimān* (these drums) for *tān d.*, &c.

Finally, we find a great number of words where cerebrals have arisen from dentals without any apparent reason, and of many of which we still find side-forms in Vedic still preserving the original dentals. Thus we have Vedic *bhanati* (he praises) beside Skr. *bhan* (to speak), Bühler identifies *bhan* with  $\phi\omega\nu\epsilon\omega$ , but wrongly, as  $\phi\omega\nu\epsilon\omega$  is from  $\phi\omega\nu\eta = \phi\omega + \nu\eta$  and  $\phi\omega =$  Skr. *bhd*; *pan* and *pan* (to praise), &c.

We may conclude then that cerebralisation is a phenomenon that has arisen within the limits of the Sanskrit language, and that it is not due to Dravidic influence. In the course of time this predilection for cerebrals grew rapidly stronger, till it produced the results that manifest themselves so plainly in Prakrit.\*

In English the original dentals have all become cerebrals, as we see from the transliteration of English words into the various languages of India. Thus in Tamil *iṣṭar* is written for *Easter*, *kōrttu* for *court*, *portt* for *fort* (initial *f* always becoming *p* in Tamil), *advāns* for *advance*, *kalakṭar* for *collector*, *testu* for *test*, &c. In Telugu, likewise, we have *kalkaṭaru* for *collector*, *ḍakṭar* for *doctor*, *āgashtu* for *August*, &c. These examples completely prove that the English pronounce *t* and *d* as cerebrals, and not as dentals. In other European languages we likewise find cerebrals developed, as in *schtehen*, the High German form of the classical German *stehen*. In *schtehen*, however, Bühler believes that the sound of the *t* is not quite so hollow as that of the Indian *t*, because the G. *sch* is not pronounced so far back in the mouth as the Indian *śh*.

The German *t*-sounds accordingly differ from the English *t*-sounds in this, that the former are pure dentals, while the latter are pure cerebrals or linguals.

\* For further information on this subject, consult C. Lassen's most valuable work "Institutiones Linguae Pracriticae."





